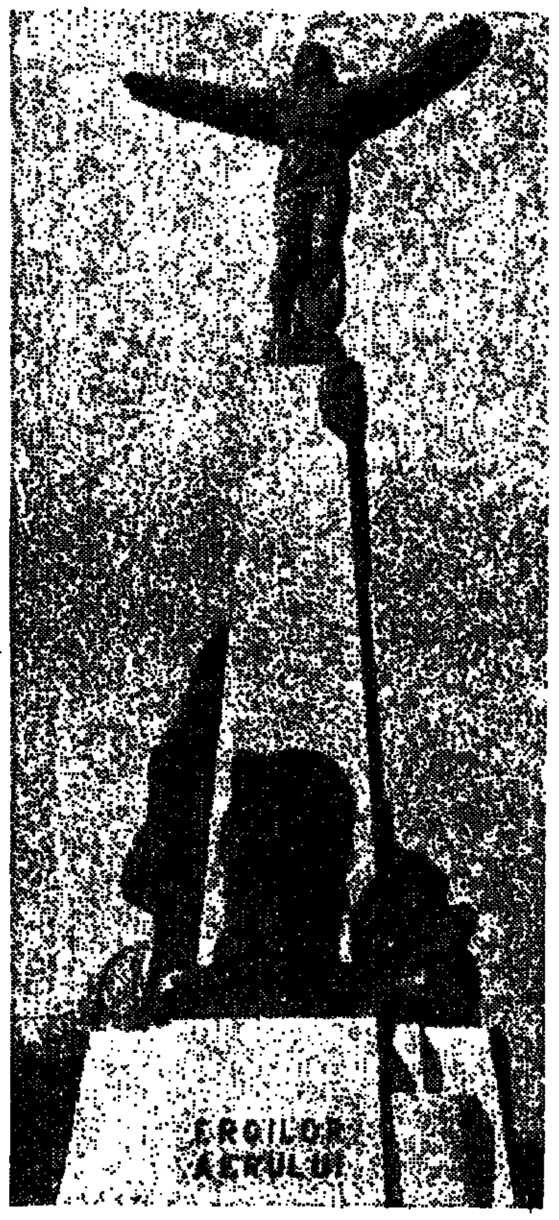
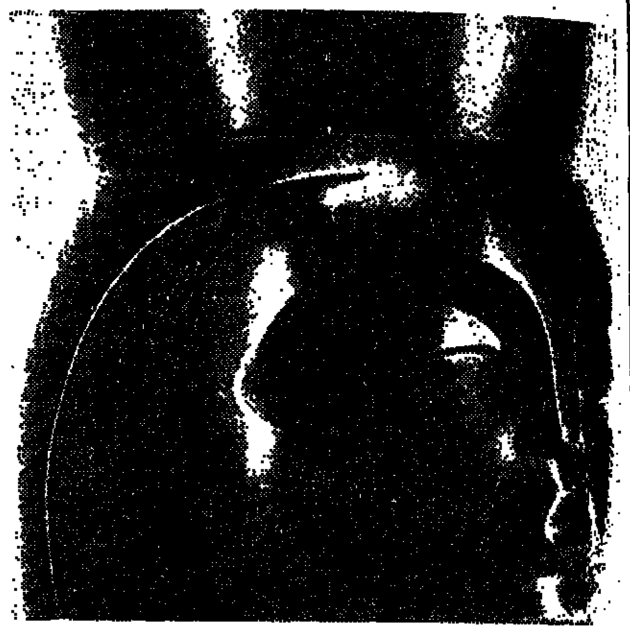
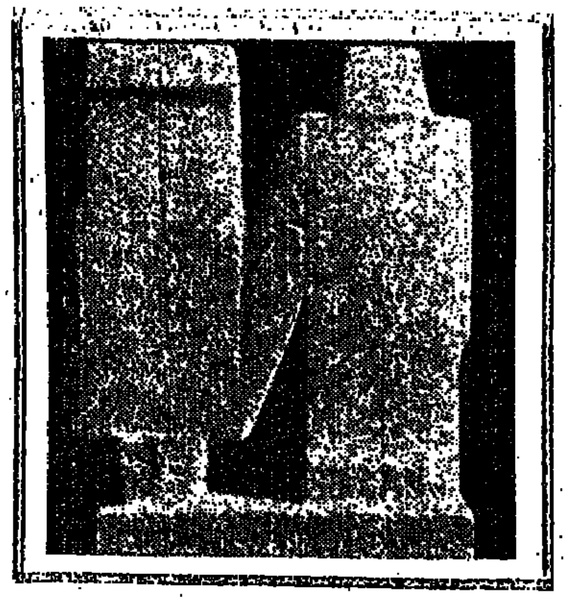
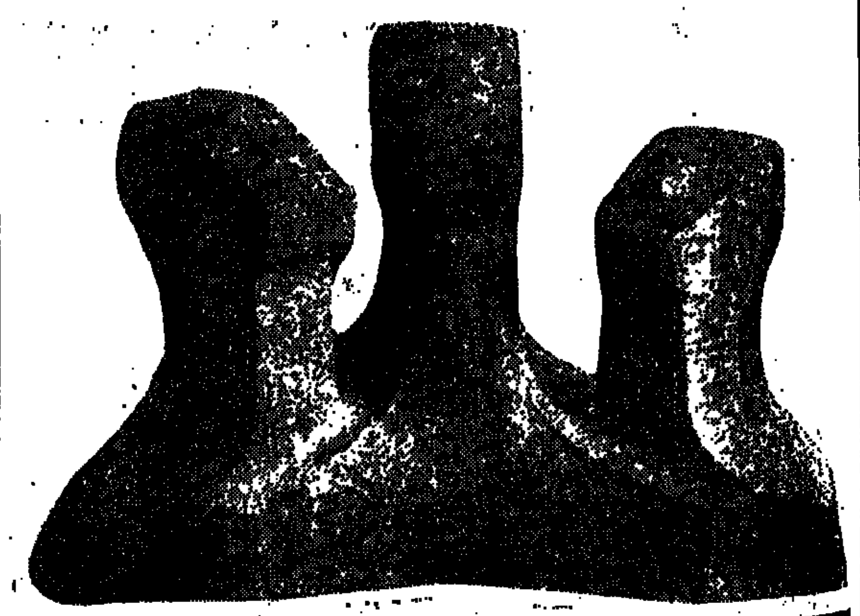




Although he passes only as a collaborator in the achievement of the Aviators' Monument in Bucharest, whose formal author is Lidia Kotzebue, the contribution made by sculptor Iosif Fekete (Iosif Negrulea between 1936—1961) — 1903—1979 — seems to have been decisive. His small-scale sculpture, just like his monument designs, highlights the permanence of certain stylistic features, a vocation for the intimate monumental, a feeling of volumetric expressivity and construction, all discreetly affirmed. Despite the expressive dramatism required by the subject, the monument Horia, Cloşca and Crişan he built in 1937 at Alba Iulia recalls one of the outlook which presided over the creation of the above-mentioned Aviators' Monument, worked over 1928—1929. During his evolution, he approached nearly all sculptural techniques and genres, evincing a remarkable skill and art of moulding and carving. His metaphorical intentions are obvious in most works, whether they are monuments, such as those erected in memory of aviator captain Dumitru Hubert in 1935, (the Bellu cemetery in Bucharest) and of writer Alexandru Sahia in 1939, (Mănăstirea, Ilfov county), the composition Don Quixote of 1933, or other works such as the bas-reliefs Steel Workers (1960), Elegy in Memory of the Racial Segregation Victims (1950), or delicate animal sculptures where one feels that the stone and the bronze, the wood and the plaster fold into harmonies of smooth shapes rejecting severe chiselling. In his portraits, he is concerned with the characters' psychology and expressivity, trying through nuanced shaping and simplification of the forms to reach typological essentializations.

B. OCTAVIAN





In our photos, reproductions from sculptor Iosif Fekete's works: the Aviators' Monument, Don Quijote, Capital, Elegy In Memoriam of the Victims of Racial Segregation, Ion Slavici, Acrobats, Cosmic Rays, Horia, Cloşca and Crişan (detail), Colt, Self Portrait

ROMANIAN NEWS

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SOCIALIST OWNERSHIP THE FOUNDATION OF NATIONAL ECONOMIC PROGRESS

Socialist ownership – the fundamental relation of the system of socialist production relationships, the foundation of Romania's progress, the source of the entire people's material and cultural prosperity – lies at the centre of the original scientific outlook of the Romanian Communist Party General Secretary, President of the Republic, Nicolae Ceauşescu. Starting from his understanding of the dialectical relationship between general and particular in building socialism with the people and for the people, the party and state leader steadily emphasizes the need for a creative application of objective general laws, of the general principles of scientific socialism to the concrete historical conditions in Romania, pursuing the continual strengthening of the role and functions of socialist ownership in each socioeconomic development stage.

The present period of great political effervescence, during which the working people, the entire nation are debating the ideas, theses and guidelines contained by Nicolae Ceauşescu's Exposition at the April 29 meeting of the Executive Political Committee, is marked by the 40th anniversary of the nationalization of the main production means. That was the beginning of the building of socialist society in Romania and opened broad prospects for the country's economic and social progress, the people becoming the true master of the homeland's wealth. "The year 1948" — Nicolae Ceauşescu said — "marked the passage to the socialist revolution. With the nationalization of the industry, banks and other production means one liquidated the bourgeois-landlord system and embarked on the socialist development of the industry and other sectors".

The socialist nationalization of the main production means carried out under the direct leadership of the Romanian Communist Party, which was a revolutionary victory on the road of building the new system, was the starting point for establishing socialist ownership. It opened a new phase in the history of production relations in Romania, led to the liquidation of the great industrial, financial and merchant bourgeoisie as a social class, to the creation of a strong state socialist sector in the economy, which made possible the transi-

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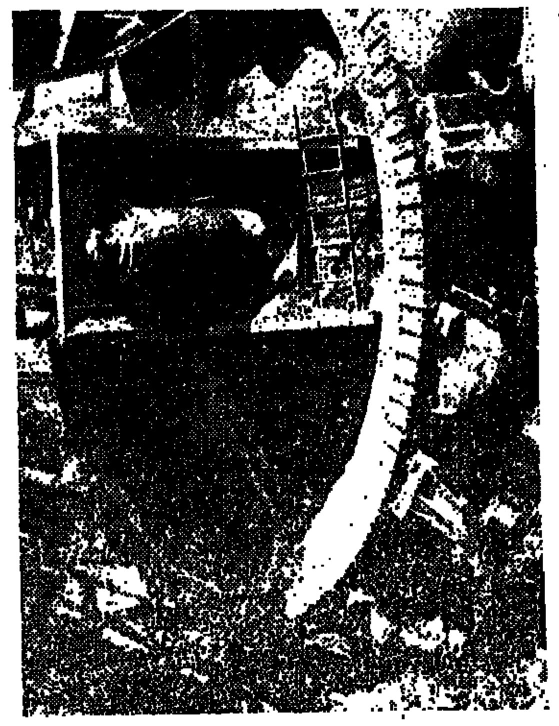

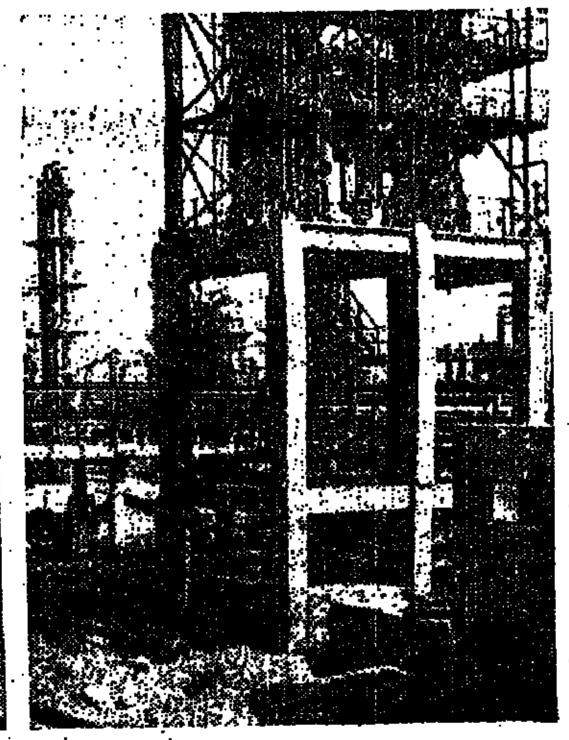

THE CONSIDERATIONS AND PROPOSALS OF ROMANIA, OF PRESIDENT NICOLAE CEAUŞESCU ON DISARMAMENT ISSUES AND THE COUNTRIES' LINES OF ACTION FOR THEIR SETTLEMENT

PRESENTED BY FOREIGN MINISTER IOAN TOTU AT THE THIRD U.N. GENERAL ASSEMBLY SPECIAL SESSION ON DISARMAMENT (PAGE 2)

A HIGH PERFORMANCE INDUSTRY

(PAGE 4)

ECOLOGY AND DEVELOPMENT

We have grown accustomed to calling the Danube Delta a kingdom of fish and birds fowl, an area in continuous transformation under water's action. In fact, this is only partly true, because the western part of the Delta, also called the river area, is made up of long consolidated soil. The Danube Delta complex development programme is concerned precisely with this part.

(PAGE 7)

THE CONSIDERATIONS AND PROPOSALS OF ROMANIA, OF PRESIDENT NICOLAE CEAUŞESCU

ON DISARMAMENT ISSUES AND THE COUNTRIES' LINES OF ACTION FOR THEIR SETTLEMENT

PRESENTED BY FOREIGN MINISTER IOAN TOTU AT THE THIRD UN GENERAL ASSEMBLY SPECIAL SESSION ON DISARMAMENT

The document highlights the great attention paid and importance attached by Romania, by her President to the works and purposes of the current special session on disarmament, the Romanian people's profound attachment to the cause of *disarmament and peace.*

Wishing to contribute to the success of this session's proceedings, Romania, her President advance to the high world forum the following considerations, of which we mention:

1. In view of the serious danger posed by the existence of nuclear weapons to the present and the future of mankind, this special session should arrive at an agreement on actions to be taken in order to speed up the negotiations on nuclear disarmament *and the complete elimination* of such weapons from the states' arsenals. Assessing the conclusion of the treaty between the USSR and the USA on the elimination of intermediate and shorter range missiles as just a modest beginning, whose importance will *materialize* only to the extent to which it is followed by new agreements, the General Assembly should call upon the Soviet Union and the United States of America to conclude the treaty on the 50 per cent reduction in strategic weapons at the earliest possible time this year.

In order to achieve nuclear disarmament — the fundamental goal of mankind — Romania proposes the following:

— besides the nuclear powers, all states concerned should take part in *disarmament negotiations*;

— a general programme of nuclear disarmament should be worked out as soon as possible, establishing as a priority and as part of a long-term outlook, setting definite terms, for the phased-out *reduction of nuclear* weapons until their total liquidation by the year 2000;

— a special body for disarmament and complete elimination of nuclear weapons should be set up to the end of negotiating nuclear weapons non-proliferation *measures, the cessation* of tests of such weapons and the elaboration of a general nuclear disarmament programme;

— in view of the danger of the ever wider proliferation of nuclear weapons all over the *world, states possessing* nuclear weapons should withdraw them within their own national *frontiers*;

— a programme should be drafted curbing the improvement of nuclear weapons and *halting the manufacture of fissionable materials* and delivery vehicles. All nuclear disarmament agreements should contain provisions banning the improvement and development of new military technologies in the *respective fields.* In order that nations all over the world may play a more important role in and make a larger contribution to the achievement of nuclear disarmament, the United Nations should become a forum inspecting and controlling military technologies, so as to prevent the development of new mass destruction weapons;

— fresh negotiations should be started with the participation of all states of the world, dealing *with the elimination of* short-range tactical nuclear weapons;

— as part and parcel of the measures reducing nuclear armament, it is very important that international cooperation *projects should be set up for the utilization* of fissionable materials exclusively for peaceful purposes;

— in order to step up the nuclear disarmament process the United Nations should support the effort of the states committed to the establishment of nuclear-free zones in various parts of the world, the declaration of countries and cities free of nuclear weapons, the pledge of nuclear states to guarantee the status of such zones.

The United Nations should call upon the Balkan states, as well as those in Northern and Central Europe, in other parts of the world, to start negotiations with a view to turning these regions into nuclear free zones of peace, cooperation and good neighbourliness.

2. In view of the danger posed by the expansion of the arms race into outer space, steps should be taken towards renouncing the militarization of outer space, towards using it exclusively for peaceful purposes, for the benefit of mankind.

To this end Romania proposes:

— the conclusion of an international treaty on the utilization of outer space for peaceful purposes alone, which should provide for the renunciation of any use of outer space for military purposes;

— the establishment of regulations for launching satellites and other *objects* into outer space.

3. With a view to ensuring a climate of stability and security for all states, reducing the danger of war and achieving disarmament and in close relationship with the practical actions and measures conducive to the curtailment and liquidation of nuclear weapons, chemical weapons should be eliminated too.

In Romania's view these actions should be aimed at:

— the elaboration and application of a programme of measures banning the utilization of chemical weapons and liquidating the existing stocks. The production of all kinds of chemical weapons should be concomitantly banned;

— the pledge of states that until all chemical weapons have been destroyed, they will not, under any circumstances, resort to such weapons;

— the encouragement by the United Nations of the creation of chemical-weapon-free zones in the Balkans, in Central Europe and other regions of the world, as an action to support the on-going negotiation of the Convention on a total ban of chemical weapons and on their elimination from the states' arsenals.

4. With a view to safeguarding international peace and security and strengthening confidence and detente among states, of utmost importance would be the implementation of measures conducive to a sizable reduction of troops, conventional armaments and military expenditures.

Taking the view that the reduction of military expenditures is an important step towards effective disarmament, Romania decided to unilaterally cut down its troops, armaments and military spending by 5 per cent, *following the national referendum* of November 1986. In line with its policy of disarmament, the Socialist Republic of Romania proposes the following:

— the annual reduction by all *countries of their military* expenditures so that by the year 2000 expenditures may drop by at least 50 per cent from the present level;

— the special session should adopt the principles which are to govern the negotiation and conclusion of agreements on the reduction of military expenditures, as agreed upon by the UN Commission on Disarmament, which should create conditions for encouraging concrete negotiations on this matter;

— each disarmament agreement should also provide for an appropriate reduction in military expenditures.

In view of the fact that Europe is faced with the largest concentration of conventional weapons and troops and considering the background offered by the conclusion of the Treaty on the elimination of intermediate and shorter range missiles, Romania proposes that measures should be taken for reducing conventional weapons as well. This should be accompanied by action to stop any modernization of short-range nuclear weapons;

— likewise, the member-states of the two military alliances — NATO and the Warsaw Treaty — should start negotiations before the end of 1988 to be attended by all European states, that should lead to sizable reductions of conventional weapons and troops by at least 25 percent until 1990, by 30 to 35 percent until 1995 and by 50 percent until the end of the century. The reductions should apply first of all to all major types of weapons — tanks and *armoured cars, military aircraft,* missiles and warships;

— as soon as negotiations have begun, a moratorium should be called, whereby the armaments, troops and military expenditures of each country in the two military alliances *should be maintained at the* 1988 level;

— the Conference on conventional disarmament should aim at striking the military balance at the lowest possible level of armed forces, armaments and military expenditures;

— a study should be made and specific proposals worked out on the minimum number of troops and armaments necessary for the defence of each country;

— *as an important part of* conventional disarmament measures, foreign military bases on the territory of other states should be dismantled and foreign troops should be withdrawn within their national borders;

— the states participating in the Warsaw Treaty and the NATO countries should start concrete negotiations conducive to the simultaneous dissolution of the two military blocs, beginning with the dissolution of their military organizations.

5. Under the existing international circumstances, in order to apply the set of measures conducive to the elimination of the use and threat of force, Romania believes it is necessary:

— to work out rules consistent with the existing international conventions which should govern the movement and the conduct of warships on seas and oceans, including by prior notifications of the United Nations about navy drills and by limitations of ship movements and concentrations in certain areas;

— to establish within the United Nations a committee on the peaceful uses of seas and oceans.

6. *With a view to eliminating* the sources of suspicion and tension and reducing the danger of military confrontation, of utmost importance would be the adoption of new confidence- and security-building measures in Europe.

To this end Romania proposes the following:

— a ban on the flight of aircraft and the passage of ships and submarines having nuclear weapons on board in the vicinity of other borders;

— the conclusion of an international treaty forbidding any attack against civil nuclear installations both in case of an armed conflict and at times of peace, and preventing any terrorist act against such installations;

— *the adoption of new* confidence- and security-building measures such as: the limitation of the armed forces taking part in military activities and the setting of ceilings to the number of war vessels and military aircraft participating in such activities; the renunciation of military manoeuvres close to the frontiers of other states and the establishment, along the borders between NATO and Warsaw Treaty countries, of a corridor free of nuclear, chemical and other mass-destruction weapons, of offensive arms in general from which all armaments and troops should eventually be eliminated, except for order-keeping forces and border guards; the prohibition of the stationing of new troops and the setting up of new military bases on the territory of other states;

— disarmament requires that the military doctrines of states should be re-examined and that the doctrines based on the recourse to war, especially to nuclear weapons, to offensive armed force, should be replaced by exclusively defensive ones.

7. The implementation of the package of measures aimed at curbing the arms race and at disarmament calls for a strict and effective control of the commitments assumed by states, so as to encourage and sustain disarmament measures.

In this respect, Romania proposes the following:

— the United Nations should contribute to working out verification and control procedures apt to stimulate negotiations in the field of disarmament;

— an international body should be established within the United Nations, open to the participation of all states which should ensure an unbiased monitoring and control of the implementation in good faith of the disarmament measures agreed upon through bilateral, regional and international accords.

8. In view of the direct relationship existing between the need for disarmament and the eradication of underdevelopment, the Socialist Republic of Romania advances the following proposals:

— an international development fund should be established, under the United Nations auspices, to be financed from the resources made available as a result of disarmament measures, for assisting economic and social development, especially that of the developing countries, as recommended by the 1987 International Conference on the Relationship between Disarmament and Development;

— the General Assembly should recommend that all disarmament agreements to be concluded from now on should stipulate that the resources made available through disarmament shall be used exclusively for peaceful purposes.

9. Contemporary realities also *call for the democratization* of international life and relations, and the active participation of all states in the settlement of the grave and complex problems facing mankind. The United Nations are to play an important role in this respect, *which makes it necessary that* all states take new actions, such as:

— the establishment of a United Nations special body for the settlement through negotiations, good offices, mediation or conciliation of interstate *conflicts, which are both a* consequence and a cause of the arms race;

— the states conducting bilateral or regional disarmament negotiations should systematically keep informed the other United Nations member states on *the progress and the results* of their negotiations, through the agency of the Secretary-General or through other channels;

— the UN Secretary-General should play a greater role, either directly or through his special representatives, acting continuously *for* overcoming the difficulties that may arise in the process of disarmament negotiations;

— the United Nations should launch a call to all states "Disarmament through Action" whereby they would be asked to initiate actions *unilaterally* and based on mutual example, in such fields as freezing and cutting down armaments, troops and military expenditures. Such initiatives taken by states in response to the call of the United Nations *should be registered* at the UN headquarters and made known to the other states.

10. Given the deterioration of the international situation as a result of the intensified arms race, particularly the nuclear *one, which threatens* the peace and security of the whole mankind, the very existence of life on our planet, the peoples and the world public opinion are called upon to play an ever more important part in *opposing the dangerous* course of events and inducing resolute disarmament measures.

A great responsibility in this respect devolves upon scientists who, by their vocation have the moral duty to work *for* a halt *to the arms race,* for the elimination of nuclear weapons, so that the great scientific and technological achievements of the human mind may be used in the interest of life and the advancement of mankind.

The Romanian delegation, showed Romanian Foreign Minister Ioan Totu in conclusion, reaffirm their determination to act together with the delegations of all other participating states, for the attainment of this historic goal — liberating mankind from the nightmare of a world disaster. By acting responsibly and with the necessary political will, the international community, the United Nations have the power to ensure that the present session, through its decisions, determines a halt in the further dangerous trend towards confrontation, the embarkment on effective measures of military disengagement and disarmament, to the elimination of the use and threat of force in international relations.

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tion to the planned management of the national economy. In industry and in the other fields where the production means were nationalized, the contradiction was eliminated between the social character of production and *the private capitalist* acquisition of the results of work, and a concordance was achieved between production relations and the nature of the production forces, which gave free scope to socioeconomic development.

The working class becomes, together with the other working people, the owner of the production means and the results of their work.

The new property relations have radically changed the people's situation in production and *society, have determined* the union of the labour force with production means. Labour force ceased to be a merchandise, while production means are no longer opposed to producers as a wealth that does not belong to them. Work is exploitation free, which considerably increases the people's scientific, technical and economic creativity in production. Each producer works in close collaboration with all the others, both for himself and for society — where he is the real master. The objective base of real equity is thus formed for all society members. Through the setting up of socialist property, man's possibility to work for himself is created for the first time after centuries of work for the *others, of work for the* exploiters.

At the same time with the change of the character of labour, socialist property favours the change of the whole mechanism of production activity. *The full manifestation* of work's creative character the assertion of the working people's initiative and capacities, the multilateral development of the people's aptitudes at all levels of social activity are accompanied by the appearance of the possibility that from the beginning of the production process labour expenses may be made for activities necessary to society and acknowledged by it. The social status won by each person, his incomes, the appreciation he enjoys in society are and must be directly conditioned by his work, his contribution to the general socioeconomic progress.

The establishment and continuous consolidation of socialist ownership, starting with the nationalization act performed four decades ago, confer upon the working people a new capacity, that of producers, united socialist owners and beneficiaries of the whole national wealth. Working people are objectively and organically present on the foundation of the socialist ownership in both carrying out production and designing, planning, organizing and managing the social output, animated by the fact that meeting the general interests of society means at the same time satisfying their personal interests. In its entirety, socialist society is a society of producers *united on a national scale.* The deep understanding of this reality is highly important because it shows that socialist ownership is simultaneously the cause and effect of the efficient work carried out by society members, determining the use of all categories of material, energy, financial and human resources with maximum scientific, technical, economic and ecological rationality. Thus, socialist ownership makes the new capacity of workers appear as a combination of several economic functions and, at the same time, the unity of equal rights and obligations for all. They presuppose the formation of a new type of working man with a sound professional and scientific training and a high political consciousness, a consistent militant for the *implementation of the party's strategy* of intensive and multilateral development of the national economy and of its increasingly more efficient participation in the world economic flow.

In the years of socialist construction, especially in the *period inaugurated by the Ninth* Congress of the Romanian Communist Party, the most fruitful in the whole multimillenary history of the Romanian people, socialist ownership has confirmed its increasingly larger part played in the complex, balanced and efficient development of the national economy, in the improvement of the material and cultural standard of all the members of society.

As the Party General Secretary underlined, "our practice has fully proven that socialist ownership, as an ownership of the whole people, whatever its form — state or cooperative —, as well as its consolidation and development represent the only way to implement the principles of social equity and justice, of strong expansion of the production forces, to ensure the welfare and *independence* of every nation". Hence, one can clearly define both the party's conception on this objective law and a whole programme of action meant to permanently strengthen socialist ownership and to consistently fulfill its multiple functions in the homeland's multilateral progress.

The stepped-up, intensive development of the national economy amplify quantitatively and qualitatively the object of socialist ownership and, concomitantly, its development and modernization create real premises for new accumulations necessary for the enlarged socialist reproduction and for increased resources designed for improving the whole people's welfare. *That is why, in the* years of socialism, especially in the wake of the Ninth Congress of the Party, the dimensions *of* socialist ownership have increased considerably and its qualitative facets have been continuously improved. Based on socialist ownership the national wealth has grown substantially from one quinquennium to another at a high rate, reaching some five trillion lei, of which fixed assets account for over 3.2 trillion lei. The *largest part of the fixed* assets have been created over the last 15—20 *years,* in the conditions of turning science into a direct force of production, ensuring a high qualitative level and superior technico-functional *and economic parameters* to all production means.

In the on-going five-year plan period the policy of rational distribution of the national income to the consumption fund — some 70 per cent — and to *the development fund* — roughly 30 per cent — will be continued. Important programmes of investment and modernization, of territorial planning, which implies the growth, consolidation and improvement of the socialist ownership, will be carried out.

To this effect, the party attaches special importance to enhancing the role and consolidating the cooperative and state ownership in all realms of the farming production, to ever more *closely pegging the* peasantry's basic incomes to the socialist sector of agriculture. The fact that agriculture as a whole will be correlated and coordinated in a unitary and harmonious way within the two *forms of state* and cooperative ownership is likely to bring about a more efficient activity in using the entire material and human potential of agriculture, in keeping with the present and future prospects of the intensive, qualitative development of the national economy. This means a higher stage in improving the organization, planning and management of the activity in agriculture, in the conditions of the new agrarian revolution, of the updated farm output.

On the basis of the permanent development of socialist ownership, it has become necessary and possible to create an original organizational framework, unique of its kind, facilitating the ever broader and more democratic participation of the working people in running the entire socioeconomic activity, in efficiently managing the national wealth, within the economic mechanism based on worker self-management and economic-financial autogestion. *In this context, socialist ownership* generates a new requirement regarding the ensurance of the unity between the general and personal interests of the members of society, meant to enhance the personal contribution to the continuous development of socialist ownership of social wealth, to increasing economic efficiency.

Prof. dr. DUMITRU CIUCUR

RECEPTIONS BY THE PRESIDENT OF THE REPUBLIC

THE SOVIET DELEGATION LED BY VIKTOR PETROVICH NIKONOV

Nicolae Ceauşescu, General Secretary of the RCP, President of Romania, received on June 4 the Soviet delegation led by Viktor Petrovich Nikonov, member of the Political Bureau, *Secretary of the CC of the* Communist Party of the Soviet Union, who attended the proceedings of the meeting of the secretaries in charge of agricultural affairs of the central committees of the communist and worker parties of a number of *socialist countries,* which was held in Bucharest, and paid a visit to Romania.

The head of the delegation conveyed President Nicolae Ceauşescu a cordial salute and wishes of success in his activity on behalf of Mikhail Gorbachev, *General Secretary of the* Central Committee of the Communist Party of the Soviet Union.

President Nicolae Ceauşescu thanked and conveyed Mikhail Gorbachev a warm salute and the best wishes of further successes.

During the interview, emphasis was placed on the relations of friendship and collaboration between the two parties, countries and peoples which, in the spirit of the understandings reached at top level, develop continuously. Underscored were *the broad possibilities offered* by the economic potential of Romania and of the Soviet Uni*on of further expanding and* diversifying economic, technical and scientific cooperation, specialization of production, in agriculture included.

In that framework, stress was laid on the significance of a closer Romanian-Soviet cooperation in agricultural science and research, mechanization and land improvement operations with a view to boosting the productive potential of the soil. Furthermore, the importance was brought to the fore of intensified swaps of experience between experts, and of growing cooperation in the attainment of large, stable crops.

THE SPECIAL ENVOY OF THE GENERAL SECRETARY OF THE CC OF THE CPSU

On June 6, Nicolae Ceauşescu, General Secretary of the Romanian Communist Party, President of the Socialist Republic of Romania, received the special envoy of the General Secretary of the CC of the CPSU, Ivan Pavlovich Aboymov, Deputy *Minister of Foreign* Affairs of the Soviet Union.

On the occasion, Nicolae Ceauşescu was conveyed a salute and best wishes on behalf of Mikhail Gorbachev, General Secretary of the Central Committee of the Communist Party of the Soviet Union.

Nicolae Ceauşescu thanked and sent Mikhail Gorbachev his salute and best wishes.

Empowered by Mikhail Gorbachev, the guest informed of the results of the recent meeting in Moscow between the General Secretary of the CC of the CPSU and the US President.

Nicolae Ceauşescu thanked for having been informed.

MOHAMMED NAZIUR RAHMAN, MINISTER OF STATE OF THE PEOPLE'S REPUBLIC OF BANGLADESH

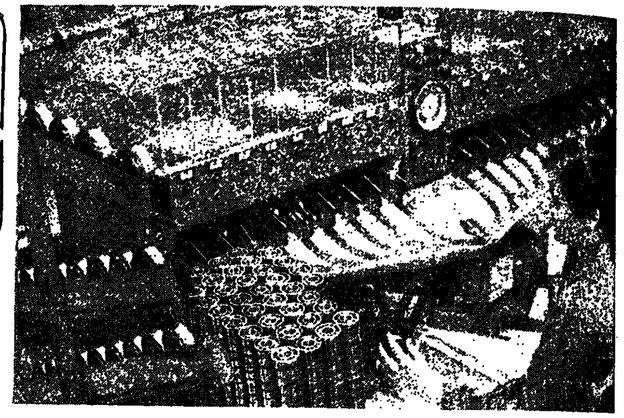
On Wednesday, June 8, *Nicolae Ceauşescu, President of* the Socialist Republic of Romania, received Mohammed Naziur Rahman, Minister of State in the Ministry of Local Government, Rural Development and Cooperation of the People's Republic of Bangladesh.

The guest handed over to President Nicolae Ceauşescu a message from the President of the People's Republic of Bangladesh, Hussain Mohammed Ershad.

During the interview, emphasis was placed on the links of friendship and collaboration between Romania and Bangladesh, which develop continuously, in the spirit of the *understandings reached at top* level. The economic potential of the two countries and the accords concluded were shown to offer broad possibilities for the further expansion and diversification of economic, technical and scientific cooperation. In that framework, stress was laid on new ways of expanding bilateral collaboration, more particularly, in machine engineering, chemistry, transport and other areas of mutual interest. It was considered that the growth of manysided cooperation between *Romania and Bangladesh would* benefit the two countries and peoples.

A HIGH PERFORMANCE INDUSTRY

- 1949... IN BRAŞOV (BRAŞOV COUNTY), a group of "intrepid" people made up of engineers, technicians and workers manufactured the first 6,000 Romanian bearings.
- 1955... IN BIRLAD (VASLUI COUNTY), the bearings enterprise started its activity with an annual output of 100,000 bearings in a range of four types.
- 1974... THE BEARINGS PLANT OF ALEXANDRIA (TELEORMAN COUNTY) – a highly automated plant – recorded an output of 31 million of bearings by the end of the year, up from the planned 30 millions.
- 1979... THE INDUSTRY OF PLOIEŞTI (PRAHOVA COUNTY) was expanded with a new unit: the Heavy-Duty Bearings Enterprise – the first of its kind in Romania – manufacturing bearings with an outer diametre of over two metres.



FROM GROUND-BREAKING TO TRADITION

The brief data above concerning the history of Romanian bearings were supplied by engineer Alexandru Filip, director of the Centre of Scientific Research and Technological Engineering for Bearings of the Industrial Central Department of Bearings and Assembly Parts based in Braşov.

Today — my host went on — the whole central department manufactures 180 million bearings in 3,000 types and sizes.

The first bearings of 1949 were turned out with modest means — ordinary lathes, conventional tools — and the assembly of only one bearing took one hour's work, while today a bearing is made in less than a second, on completely automated lines. Naturally, along the years people have learnt to be perseverant, tenacious and, above all, *they understood that they must* first learn how to do something before actually doing it.

In fact, the aim of the Centre of Scientific Research and Technological Engineering for Bearings was to permanently study the technical level reached in the world and to find the most suitable solutions to the construction of bearings, the modernization of technological processes, as well as their mechanization and automation.

Thus, of the useful technologies applied in the production of rings, first of all we resorted to hot forging from steel bars; more recently we have adopted cold extrusion from case-hardening steel. The new type of cementition steel obtained in collaboration with specialists of the Iron-and-Steel Works of Târgoviste (Dîmbovita county) has naturally claimed supremacy, thanks to its better plasticity on extrusion and its remarkable purity, qualities ensuring it durability and resistance to degradation.

An active control of the bearings — be they two-gram or eight-ton heavy — throughout the make process ensures an accuracy within tolerances of up to a tenth of a micron. These are only a few of the qualities boasted by the bearings which, according to the Central Department's classified list of standardized products, meet the needs of the car and truck-making, machine tools, oil, nuclear power, railway, water and air transportation industries. Special mention should be made of the special bearings — of great fineness and complexity, working in special conditions, at high speeds and with enhanced precision — such as those meant for machine tools, turbo-blowers, etc.

AN EXPERIENCED SUPPLIER

The list of achievements of Rulmentul Enterprise in Braşov mentions under the UKR trademark a steady export of bearings to over 60 countries.

What could justify this constant demand on the world market? First, the high quality and reliability of the bearings turned out here. Then, the promptness with which every contract with foreign partners is honoured.

This is actually the fruit of the competent endeavours made by the entire collectivity of engineers, technicians and workers ever since the setting up of the enterprise in 1959, when from a mere section of Steagul Roşu plant it was turned into a self-reliant unit. "The uneven, the gram and the accept" have become, in the long run, the slogan of an activity which called for a better organization of the workplace and of working hours, a higher professional training – all with a view to improving the products' quality. The uneven, the gram, the second — three basic parameters of economic efficiency. The ability to be competitive has its roots here. It is an ability of each of the 8,000 employees — workers, technicians and engineers — of the enterprise. An ability having a beneficial influence on each and every product, whether it is a radial, self-aligning-radial, radial-axial, axial, self-aligning-axial (all in all coming in 1,500 types and sizes) or a special bearing of high accuracy and reliability. To these we should add the bearing boxes, turned out. Besides fully supplying the needs of the domestic market, the Enterprise of Braşov also exports bearing boxes. The highly efficient and advanced technical equipment of the enterprise assists in the smooth unfolding of technological processes, eventually ensuring the products' irreproachable quality.

More or less mere figures: 60 millions. This is the number of products manufactured yearly by Rulmentul. No export-bound batch has ever been sent back.

On this page we present several aspects from one of the bearing producing enterprises, representative for this branch of the Romanian industry, "Rulmentul" Enterprise in Braşov. The products of this enterprise are exported to over 60 world countries.

THE GIANTS OF PLOIEŞTI

Sea storm... Rollers were girlicking against the ships' womb. The danger looked imminent. The ships were anchored to the offshore drilling rigs. The collision could no longer be avoided. Or at least so it seemed to any inexperienced onlooker. The sailors, just like the oil-workers, were undisturbingly tending to their work. They knew nothing was going to happen. The equilibrium — precarious at first sight — was guaranteed from deep down below by a huge bearing with the outer diametre of over three metres. This was one of the colossuses turned out by the Heavy-Duty Bearings Enterprise in Ploieşti.

"Since 1979, when it was commissioned", said commercial director Nicolae Oprea, "the enterprise has assimilated a wide range of bearings in a large variety of types and sizes, ranging between an inner diametre of 180 mm to an exterior one of 2,300 mm and even more.

Ever since its commissioning, the factory benefitted by special capacities for bearing production. It had know-how, requisites of the main installations and the constructive documentation of bearings given by the American firm "Rollway", as well as a powerful nucleus of specialists (engineers, technicians, workers) who took over the 20 year-old traditions of the Romanian bearings made at Birlad (Vaslui county).

A constant expert — started in 1980 — to partners in the USA, Belgium, Great Britain, France, Austria, Japan, the Philippines, Argentina, Venezuela, etc. is maybe the best proof of the high-tech level of fabrication.

Everything starts — added in his turn eng. Spiridon Zăinescu, the head of the production preparation office — from the quality of steels used. They are Romanian steels of high purity, elaborated in vacuum, to which thermal treatments in a controlled atmosphere and rectifications of great precision and fineness are added.

Made in high precision classes, with a dimensional precision of the order of microns for rings and tenths of microns for rolls, in lots of one to several thousand pieces and benefiting by an active, non-destructive control of the whole technological flow (ultrasound, magnoflux) the bearings made in Ploieşti can function in conditions of special temperatures (from −60°C to + 200°C).

Starting from fabrication, where processing is done on digital control machines, the passage through thermal treatment, effected in a controlled atmosphere, to rectification — an operation of great fineness where the geometrical form is established, the whole technological process is ensuring the performances of Romanian bearings.

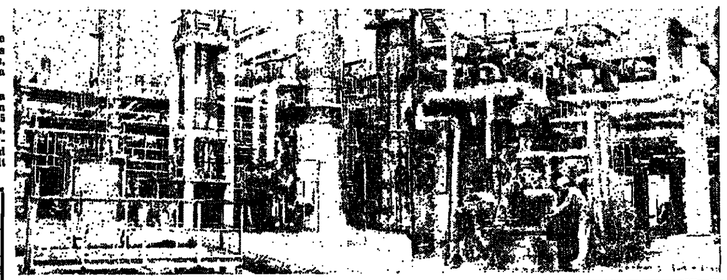
To all that — the commercial director Nicolae Oprea told me — is added the works' great technological flexibility. In virtue of this fact, we can produce any type of bearing, carrying out orders in three months — for special bearings — and one month — for standard bearings.

MIRCEA ŞONGUTEANU

TIH-445 TRACTORS

After Braşov, the town hosting the mother enterprise of the Romanian tractor-building industry, Craiova has become the second biggest producer of such machines, before such centres as Miercurea Ciuc, Codlea, Timişoara and Oradea.

These days, the builders of Craiova have celebrated a remarkable performance: the 37,000th tractor has been manufactured. The tractors built here — of the TIH-445 type (meant for various works in agriculture, construction, telecommunication, silviculture etc) — have been awarded gold medals at the International fairs of Brno and Zagreb. About one third of the number of tractors built in Craiova have been exported to scores of countries.



A STANDARD ENTERPRISE

Electroputere of Craiova is presently a standard unit of the Romanian electrical engineering industry. Among others, the plant of Craiova turns out Romania's entire production of Diesel-electric and electric locomotives for main lines (the plant has manufactured over 3,500 Diesel-electric locomotives of 2,100, 2,500, 3,000, 3,500 and 4,000 hp, as well as electric locomotives of 5,100 hp), 98.9 per cent of the output of electric transformers (starting from 0.25 kW), one fifth of the output of electric generators, almost 30 per cent of the production of electric motors.

The same plan Produced, for the first time ever in Romania, transformers of 440 MVA and 250 MVA, respectively, delivered to the first Romanian nuclear station.

"HEALTH WORKS"

A modern drug factory has started production in Târgu Mureş municipality (an important centre of Romanian medical higher education). Here, extracts from animal biological mass and from Transylvania's rich mountain flora will be mainly produced. Also, other drugs will be obtained through chemical synthesis. But the basic product will be TROPOFAR (a new hepatoprotective drug with a broader therapeutic efficiency than products of the same family, currently used in medical practice). LYTEROLACTIL (another novelty used in creating the balance of intestinal flora especially for the new-born, as well as in treating malabsorbtion) is not devoid of interest.

The new "health works" will produce annually: one billion pills (of various drugs), 15 million ointment tubes, 8 million bottles with lyophilized products.

The Târgu Mureş drug factory completes the technical profile of the Romanian pharmaceutical industry which includes at present, big and modern factories in Bucharest, Cluj-Napoca, Iaşi and Calafat. In these units, over 700 medicinal drugs are produced, covering practically, the whole fabrication list of world pharmacopoeia, enriching it at the same time with a series of original drugs and preparations of great therapeutical value.

The Romanian pharmaceutical industry has increased over 8.4 times its production in the last 20 years.

A TRAIN WITH 130,000 CARS

The main waggon manufacturing enterprise in Romania — based in Arad (one of the largest in Europe, photo above) — has assimilated and introduced in the production line a new type of goods waggon with an axle load of 25.7 t. Being a national first, the new type of waggon (used for the transportation of ore) is designed for the foreign market. It can carry a load five times larger than its own weight. It is equipped with braking gear and modern bogies adequate to the complexity of the new product, being able to carry 125 tons of ore at a speed of 90 km per hour.

Besides the Arad unit, the Romanian passenger and goods car making industry covers other enterprises as well — those of Drobeta-Turnu Severin and Caracal, the bogie making factory at Bals, other units manufacturing parts and subassemblies. These units produce scores of types of waggons of various capacities and for different usages (for the transport of bulks, liquids, cereals, etc.).

Most of the Romanian output of goods and passenger cars is known and appreciated in scores of countries. As a matter of fact, the exporting firm, Mecanoexportimport has business relations with more than 800 firms in 80 countries on all continents. Its offer in this sector is extremely rich: some 86 types of goods waggons (including 58-t special waggons for the transport of cereals), passenger cars, dining cars (for all railway clearances), as well as Diesel-hydraulic, Diesel-electric and electric locomotives (of up to 5,100 hp), trams, underground trains and cars, construction equipment and tools, hoisting and transportation equipment, motors and air compressors, etc.

In the 1976—1987 period alone, Mecanoexportimport exported, among other things, about 130,000 goods and passenger vans to countries like Algeria, Angola, Argentina, Austria, Bangladesh, Brazil, Bulgaria, Czechoslovakia, People's China, Egypt, the Philippines, Gabon, the German Democratic Republic, Greece, Indonesia, Iran, Mexico, Mozambique, Nigeria, Peru, Poland, Sri Lanka, Syria, the USSR, Vietnam, etc.

N. TUDOSE

MODERN PETROCHEMICAL WORKS

The first amounts of ethylbenzene have been produced at the youngest Romanian petrochemical works — that of Midia-Năvodari (photo above). This marks a new stage in increasing the degree of utilization of crude, in continually boosting, diversifying and modernizing production.

The petrochemical works in Constanţa county, covering an area of about 400 ha (more than one quarter of which have been reclaimed from the Black Sea and from the lakes Năvodari and Corbul), is one of the largest and most modern in this country, alongside the Piteşti, Bucureşti and Brazi plants. It has been built according to a modern, compact design, being directly connected to the Danube-Black Sea Canal (by its Poarta Albă-Midia-Năvodari section), and the Constanţa sea port.

The petrochemical works of Piteşti is the largest unit of the kind in Romania. Working here are over 80 productive installations and plants ensuring the successive processing of the "black gold", of other secondary raw materials; virtually the entire amount of crude subjected to refining and distillation is to be found in the over 100 finished products turned out here. Among the basic products requested both by the national economy and by foreign end-users are: gas, gas oil, gaseous and liquid components for subsequent processing, plastics, monomers for organic synthesis, and others.

The complex, which will eventually comprise 30 production and auxiliary facilities (mechanical plants of various utilities) is a creation of Romanian engineering and technology. At present, the works on the Black Sea shore produces a wide range of fuels, of petrochemical raw materials (high- and low-pressure polyethylene, polypropylene, etc.) for the national economy and for export.

- The Oltenita shipyard delivered to export a new 5,000-t motorship. Over the last years shipbuilders delivered 100 ships of such capacity to the foreign market, now preparing them-selves to launch the 10tsd ship destined also for foreign partners. At the same time the above-mentioned shipyard commissioned the first 4,800-hp pusher, while fitting out the second one of the same capacity.

"UNDERGROUND" NOVELTIES

89 per cent in 1985, 75.3 per cent in 1986, 82 per cent in 1987. These are figures which illustrate the dynamics of mining equipment production.

Since 1982 the mining equipment production of Romania has doubled by the growth, among other things, of the extent to which the already operating productive units are charged, from 70 per cent to 93.3 per cent. New modern units and technological lines have also been brought into operation in Petroşani, Satu Mare, Carei, Negreşti-Oaş, Tîmişoara, Baia Mare. Special stress was laid on the increase of the reliability of the mining equipment, on its competitiveness in the foreign market.

The scientific research body in this field, which comprises over 1,300 inventors, acknowledged by the Romanian Office for Inventions and Trade Marks (OSIM), provides the whole necessary documentation for the industrial fabrication. In a relatively short time, the mining equipment industry assimilated, on the basis of its own designs, new types of high-efficiency and high-productivity equipment. In the near future, the whole range of mills necessary to the mining industry, the whole "family" of equipment for the preparation of useful minerals will be assimilated; the range of equipment for the exploitation of 4—5-m deep layers, the range of equipment for the black coal and lignite mines will be completed, while new equipment and technologies for rock consolidation will be made. New installations for mixed operations in the capitalization of low-grade ores will be assimilated. Noteworthy is that the export of mining equipment grew 5.5 times in 1987 as compared to 1986.

(Centre right photo: Rogeţu mining works).

LUDOVIC ROMAN

OLD CIŞMIGIU REJUVENATES

It is said that if you come to Bucharest and do not visit the Cişmigiu Gardens you miss a lot. Because Cişmigiu is one of the oldest and most loved parks in Romania's Capital. At present vegetation refreshment works and the capitalization of older works are effected.

Also, other attractions of the elegant Bucharest park have not been omitted. The Japanese garden, the "rookery", the aquatic vegetation and many others will be restored.

URBAN AESTHETICS

In the last years, several tens of thousand apartments have been built in Dîmbovita municipality. The town preserves, nevertheless, its architectural personality. Besides the new buildings were designed in full harmony with the older, valuable ones and with the monuments of the past. (Left photo: the town's main square).

MODERNIZATION

Building the multilaterally developed socialist society in Romania is based first of all on the qualitative accumulations of the previous quinquennia, the modernization of the technico-material base, the improvement of the production forces in their ensemble. In the present stage, undergoing permanent changes and renewals, the role of intensitative factors in the plane of work and technical-organizational structures becomes a priority compared to that of quantitative, extensive factors. This orientation, far from being a combination of circumstances, represents a distinctive trait for the Romanian type of economic growth, at present and in future.

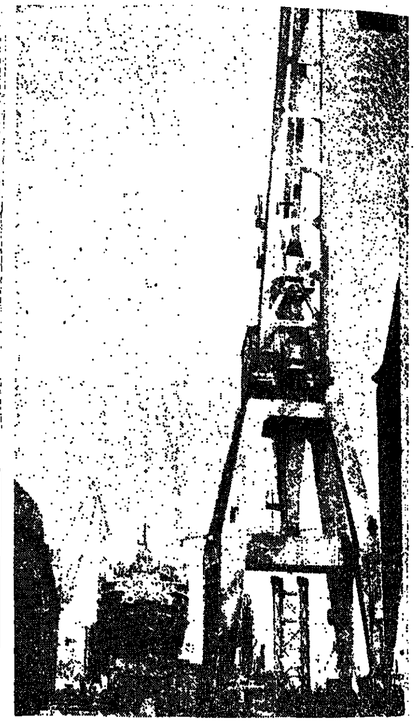
In the context of strengthening the qualitative side of development the improvement of organization and the modernization of industrial processes *have become economic objectives of great importance.* According to the special programmes established at the level of each production echelon, an ample process is carried out of the prior development of high tech branches and sub-branches capitalizing power resources, fuels, labour force at a high level, ensuring the new products, by the technico-economic qualities involved, the necessary competitiveness. In this respect, telling is the fact that the machine building and chemical industries register growth rates above the average of other sectors, that electronics, electrical engineering, fine mechanics, etc. play a major role in equipping with high tech installations and modernizing the whole national economy, or that important savings are registered with fine syntheses chemistry, small weight products, ultrapure materials, high purity reactive substances.

According to the enterprise's speciality, to the specific industrial branch but especially to the needs of the national economy, the programme concerning the improved organization and modernization of production were established over two or three stages. For most enterprises 1988 is the year of passing to a new stage which will, at the same time, conclude the whole cycle of modernizations established for the on-going five-year-plan period. Naturally, the role of scientific research and technological engineering in materializing these programmes becomes prevailing, because in the Romanian economic strategy the growth of labour productivity is achieved first of *all thanks to the wide scale* introduction of technical progress.

That is why scientific and designing efforts are focused especially on the application of new fabrication, production modernization and automation technologies, the design of highly productive machines and installations as well as toward improving the technicality value of the installations.

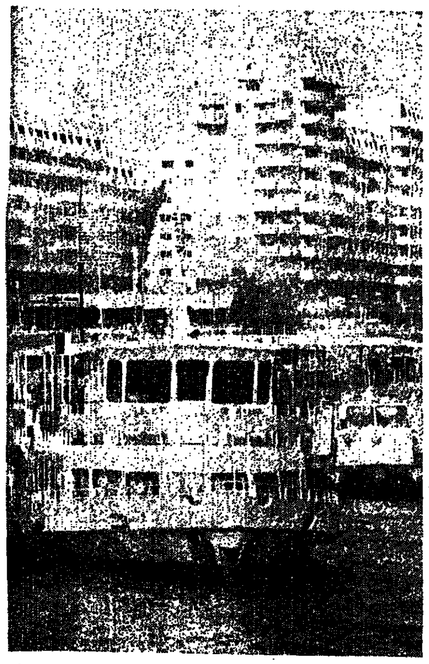
By covering distinctive qualitative levels, the action of improving management and the continuous modernization of production processes have included all domains of activity.

Modernization, a topical economic concept, has become a permanence, the very condition for multilateral progress.



AT THE TULCEA SHIPYARD

INVENTION SCIENCE



The news about "a small shipyard for river-going ships of 300 t" in Tulcea, dated 1848 and signed by the German traveller Ungewitter, is the *first* documentary attestation of this kind, which means that the forerunner of the present Shipbuilding and Technological Equipment Enterprise (ICNUT) is 140 years old.

We mentioned the news because, besides the information contained, it points out the shipbuilding tradition of the Tulcea people. That also suggests that the ships launched today result from a trade learned little by little, not overnight but polished by time (a time older than the one mentioned by Ungewitter) and the generations that have passed, polished in their turn by the forerunners' experience in skill and diligence.

Of course ICNUT does not resemble the small shipyard of the mid-19th century, but it certainly has a "gene" of technical imagination inherited, let's say through a certain work heredity, or a "shipbuilding genius" consisting of the use of shipbuilding knowledge and passion at the level of modern technologies.

In fact, through the constant achievements of the technical creation collectivity, a research unit with distinctive prerogatives, ICNUT also has a shipbuilding invention science, gathering in the modernization of industrial processes the talent, vocation and professionalism of its specialists as eng. Constantin Dutu, the director of the enterprise, assessed.

An example in a possible series of techinico-scientific novelties : *In November 1987, technical* engineer Ion Oanu obtained unanimous appreciations at a lecture session for the improvements made to the mounting operation of the ships' propellers and helms. The young technician had designed a modular platform on which the part to be mounted is fastened with the help of a special support. Benefitting by freedom of movement, the platform can travel to the ship in construction where, through specific controls, it places the screw propeller and the rudder directly in the socket. Thus conceived, the operation is carried through more rapidly, without moving parts about with the help of a crane and *using half of the workforce* needed previously.

Falling in the same line of modernization is the "automatic tea welding device for complex frameworks" which, though may sound double Dutch to some, accounts for a considerable efficiency increment. Trying to decipher its technical meaning we learnt that the welding of the framework on sheet up to 1,5 m wide is carried on simultaneously on both *fastening sides,* eliminating specific strains. Moreover, the device developed by technician Florentina Nicolaina and technological engineer Ion Vasile trebles labour productivity.

Meritworthy is the fact that *the two Tulcea experts'* work was awarded a prize at the contest of technical creations in the machine engineering field.

RESEARCH IN THE PLANT

Updating remains a coordinate of production, its spearhead, whose efficiency is measured, in the last analysis, by the quality and technicalness of the products achieved.

Said the director of the enterprise :

"In parallel with the building of sea and river-going ships of various capacities — last year we delivered eight 3,000-t barges and a 2,000-t ships, some of them meant for goods transportation on the Danube-Black Sea Canal, as well as a coastal fishing ship —, our enterprise, highly flexible regarding the complex needs of the national economy, simultaneously builds large-size equipment and installations for hydropower stations, installations for storage lakes on inland rivers or for water management works. An important part for instance, *the radial gate,* has been delivered to the hydropower plant at Volia, on the Olt river, in Brasov county".

The diversification of production calls for a modernization programme materialized both in technological flows and in the points of control of the products' quality. A true "radar" of the shipbuilders' activity is the nondestructive control and special operations lab. Tests are carried on here with ultrasounds, radiations, penetrating liquids, magnetic powders and low-frequency mechanic vibrations on various parts, subassemblies or operations.

Also, with the ships undergoing repairs, the thickness of the sheet plate to be replaced is checked here, in order to comply with the admitted tolerances.

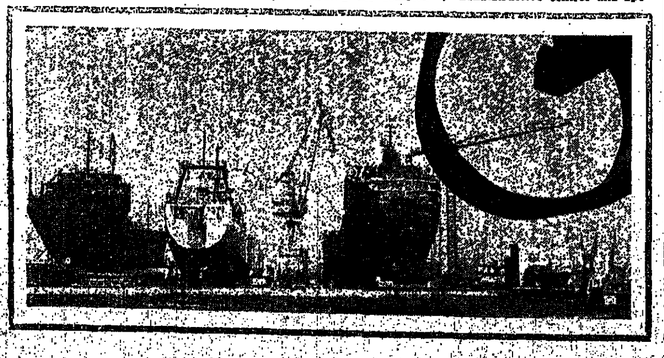
"The name of the lab, a kind of plant research section, filled with state-of-the-art equipment, also includes the phrase 'special operations'. What do these consist of ?"

"One of them, sialitisation and stress relaxation through mechanic vibrations of the main parts of the ship body, replaces the old method of thermal stress relaxation, producing an advantage of 10 to 1. Translated into the language of economic efficiency, this means that the respective operation is conducted in a 10-time shorter period. Yet the method has other advantages too : it eliminates the insurgence of large-size parts to heat-treatment enterprises and saves some 60 Mwh monthly."

Another highly profitable method (already extended in the Resita and Mangalia shipyards) concerns the diagnosis of welded joints. It was developed by the lab's experts on the basis of ultrasounds.

These are some of today concerns of the people who, while bearing the seal of tradition, enrich it with new, sometimes modern elements.

M. AUNEANU



The esplanade of the town of Tulcea (in the middle photo) and aspects from the shipyard (top and bottom)

ROMANIAN NEWS

FREE SUPPLEMENT TO NO 23 (532) JUNE 10 1988

THE EXAMPLE OF THE MACHINE TOOL INDUSTRY

In the 1970s the technical genius of the Romanian people *was a fact of common knowledge* ; nevertheless the absence of an adequate framework for manifestation, to be more specific, the comparatively modest development of the heavy industry before 1965 obviously slowed down the full assertion of the creative talent of the Romanian experts.

It is the undeniable merit of the General Secretary of the Party, President Nicolae Ceaușescu, to have found and applied the major, safest and most productive solution, that of the efficiency equation in our national economy, the results being qualitatively improved and several times higher than expected.

An eloquent example in this respect is provided by the machine tool industry, a field in which the growth recorded in only two decades ranks the products of the Romanian enterprises *on a par with those made by companies* of international renown boasting older research and manufacturing traditions.

Indeed, while before 1965, in keeping with offers, orders were received only for a few series of drilling machines and universal throw lathes, at present we compete with state-of-the-art achievements. Among them, NC machine tools, automatic processing centre, controlled manipulators and industrial robots, as well as various types of flexible automatic cells for total or partial technological processes enjoy high appreciation.

When considering the advancement made, the harmonious intertwining of several fundamental conditions specific to Romania must be taken into account :

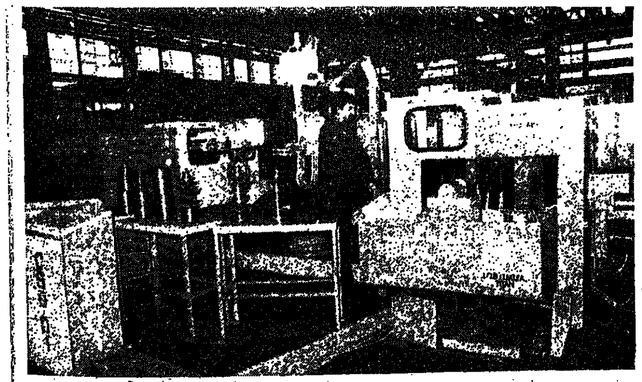
— the energetic action taken by the Romanian state for the continual diversification and *modernization of manufacturing activities*

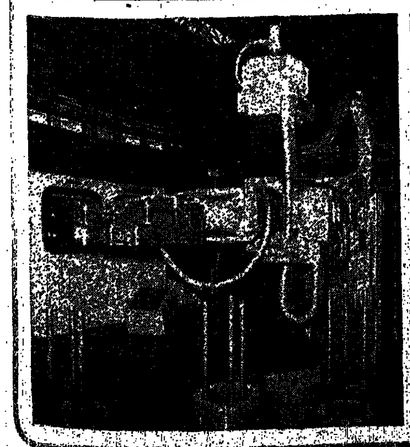
— the existence of realistic domestic development programmes that have created the adequate framework for the emergence and development of various industrial branches and subbranches

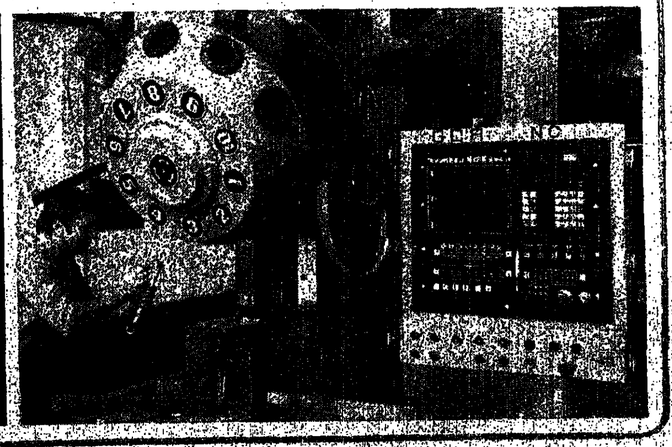
— the development of research and technological engineering on the basis of a qualitatively new educational system

— a more active participation of Romania in the international division of labour through scientific cooperation and collaboration as well as through the promotion of many outstanding achievements for export.

Nicolae VAIDESCU
Minister of the Electrical Engineering Industry





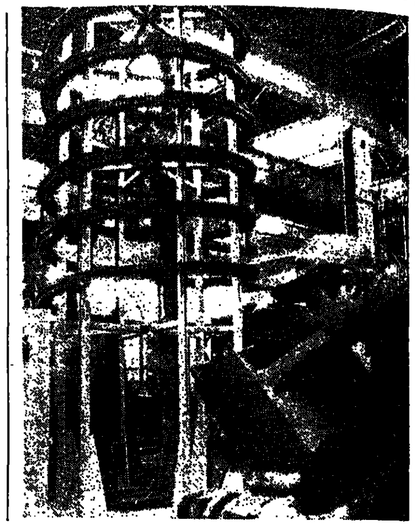


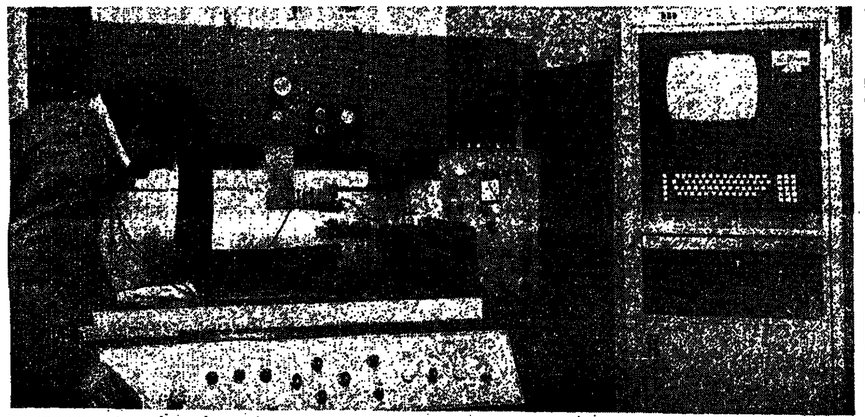
WE CAN SATISFY YOUR NEEDS!

The extreme situations in which various industries find themselves worldwide, manufacturing to order or manufacturing in order to create stocks, engage the entire creative intelligence of modern man as well as exorbitant financial means.

Therefore, while refraining from a detailed analysis of these concepts, we hold the view that it would be ideal to be more and more "flexible". Fund blocking in stocks represents a problem even for the socialist economy, even though, as is well known, the *absence of competition* and state planning have had a regulating effect on production. However, taking into account the fact that, at least for the time being, Europe — unlike the USA or Japan — does not feel the pressing need to apply the new "factory of the future" system (CIM), Romania, very much like other countries, maintains logical stocks at the automation level required by transfer lines, mechanical processing centres and flexible automatic cells.

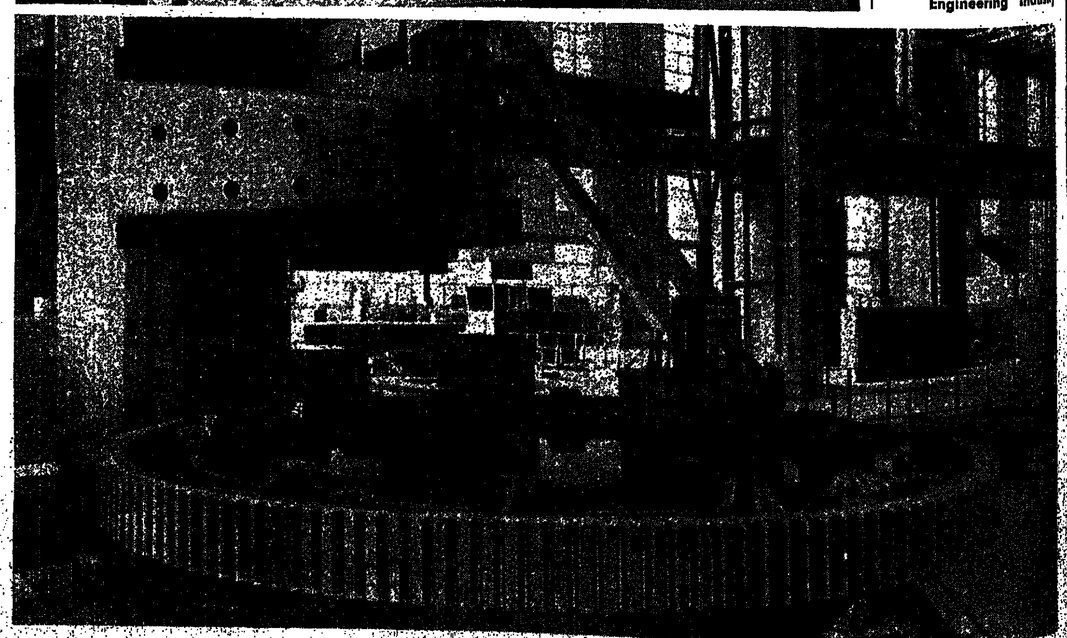
We hope that the high-quality manufacturing of such equipment meeting the notion of "automation islands" as an *intermediary step towards CIM* will elicit the interest of foreign customers all the more so as we constantly take severe measures as regards their design and manufacture, in order to create interconnecting facilities for complex processing structures. This is due to the fact that, in keeping with the latest trends in the field and considering the actual ability of most machine manufacturers, the most difficult part about CIM implementation is not finding the necessary tools but rather developing adequate structures for the application of the so-called manufacturing automation protocol (MAP), *that is, of the intercommunication language* between designing offices, manufacturing control ones and the operating machine tools.





On this last point we wish to call the attention of our potential customers to the fact that the Romanian machine tool industry boasts interesting achievements which, from a qualitative point of view, meet and sometimes even top ISO standards or the standards of our many licensors (Toshiba, Mitsui-Seiki and Okamoto of Japan, Line — France, Verson — Belgium, Waldich-Coburg, Pitler, Kaolmann, Brosch and Fortuna of West Germany.

Alexandru STANESCU
Deputy Minister
of the Electrical
Engineering Industry



POWER AND INTELLIGENCE
THE INDUSTRIAL CENTRAL FOR MACHINE TOOLS (CIMU)

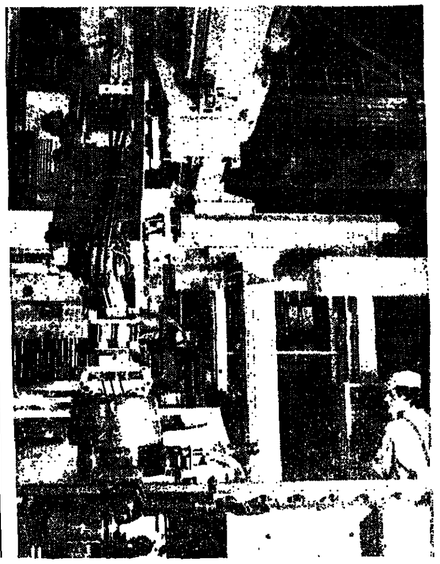
Endowing modern tools with intelligence, turning them into machines *more fit for hard work than man* or animal force constituted a major preoccupation for many generations of researchers. But only nowadays, as a result of the fusion between machine tool building and computer technology, has a solution to this problem become possible. And although this field boasts several years' experience, robotics, in its industrial acceptation of unifying power and intelligence, is an altogether new reality.

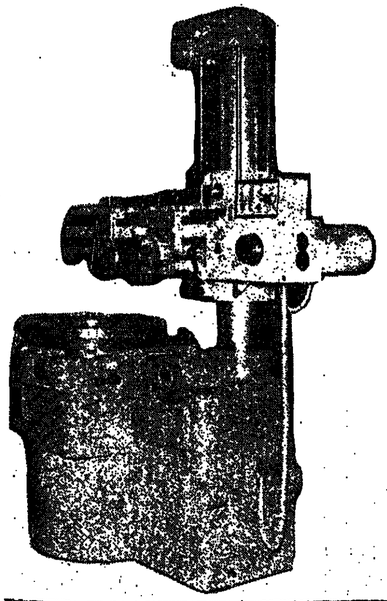
The large-scale manufacture and application of robotized machine tools is a question of planning. Thus, besides social constraints (such as observing a judicious ratio between the population increase and the *number of jobs*) and financial ones, the achievement of equipment for industrial process automation ultimately depends on the viability of the designing and manufacturing system, that, is, on the organizational format of the specific scientific and technical structures. From this point of view, the solution found in Romania is one of the best, considering that the machine tool industry (an activity completely different from that of previous decades) is subordinated to the Ministry of the Electrical Engineering Industry (MIEt), which also coordinates the automation activity and computer technology production.

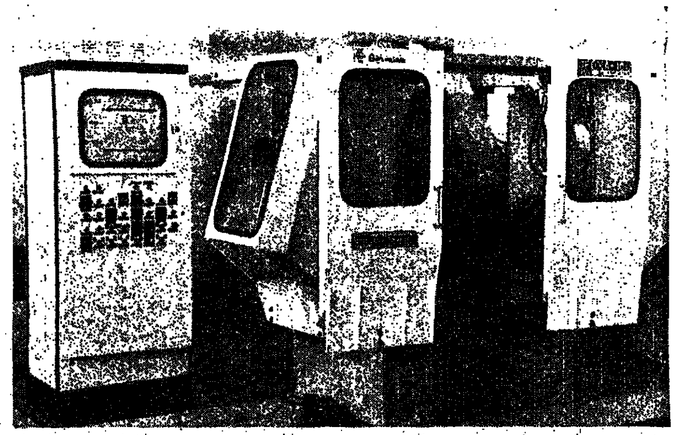
Moreover, as a work object, the development of automated equipment for mechanical processing is directly incumbent on the institute of Scientific Research and Technological Engineering for Machine Tools (ICSITMU-Titan), a unit which also comprises the Central Institute for the Electrical Engineering Industry (ICIEt), in fact the leading and coordinating centre for the whole research network in the ministry.

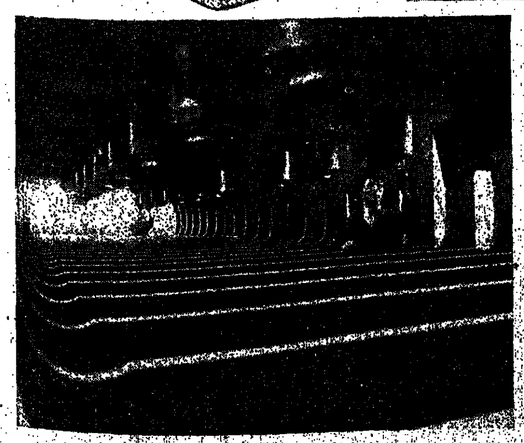
The close cooperation between institutes and enterprises, made possible by the organization structure adopted, has led to important achievements. Many of them are already known internationally; the others, which have recently been developed, will be presented on the following pages.

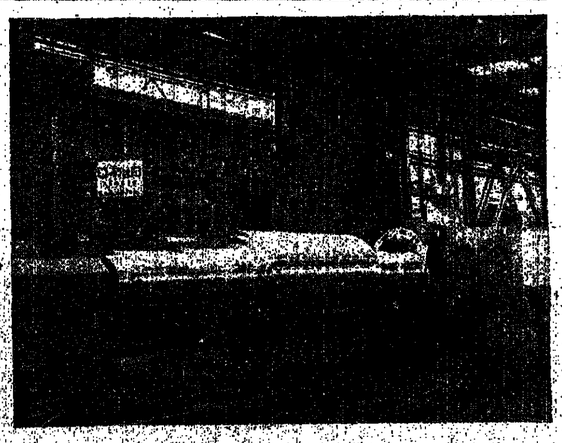
Prof. Gheorghe SAVA
Head of the Technical
Information Department



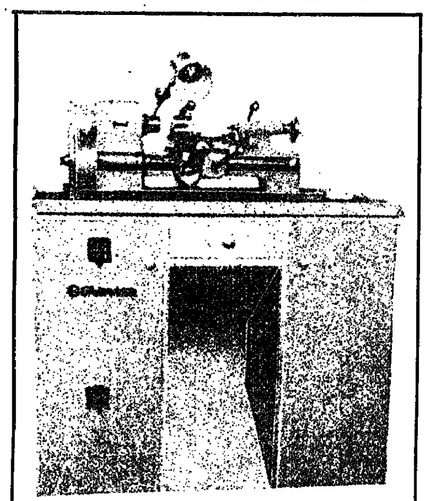






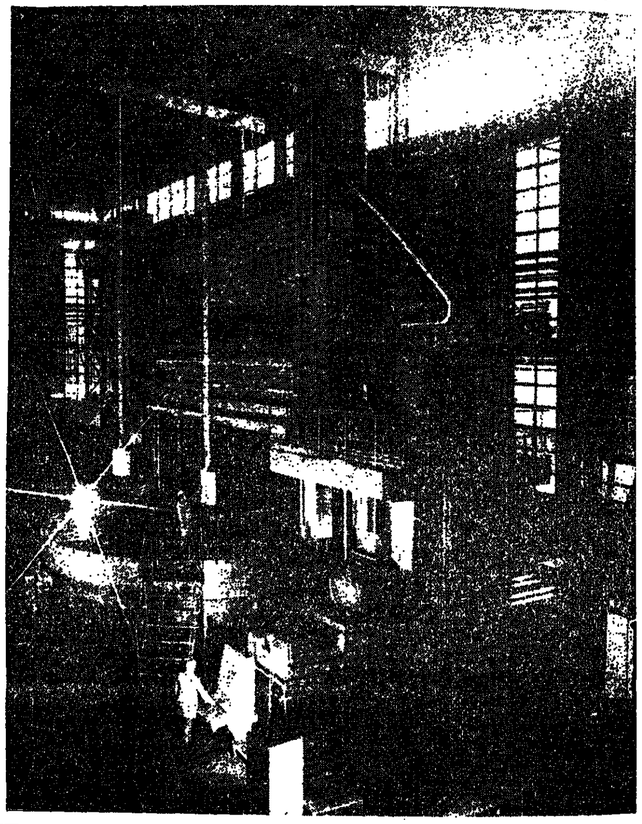


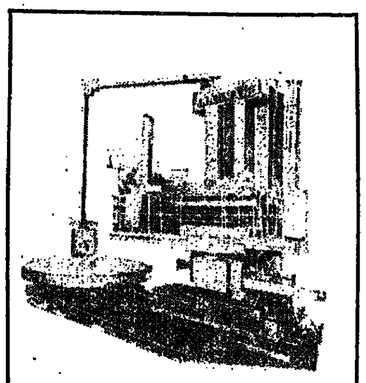
MACHINE TOOLS FOR THE MACHINE-BUILDING INDUSTRY

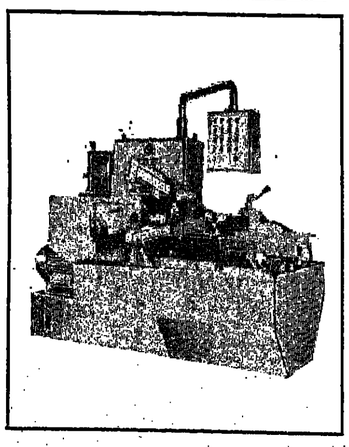


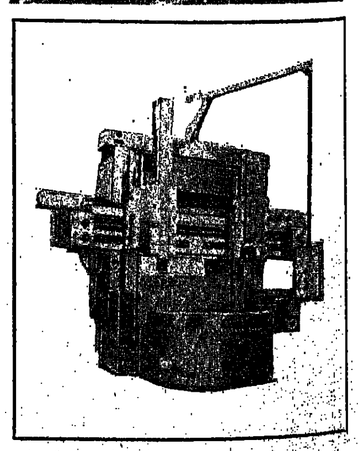
LATHES

- universal lathes for facing and tapping with manual or mechanic feed
- capstan lathe with horizontal hinge-pin
- frontal lathes
- tilted frame lathes with digital control
- semi-automatic lathes for copying
- lathes for cutting and slotting ingots
- heavy parallel lathes with lenghts between 1,000 and 1,600 mm
- automatic nonaxial lathes, with cams
- automatic lathes with length feed
- multi-shaft lathes
- parallel lathes with digital control
- special lathes for drill pipes processing
- lathes for copying unround shapes
- vertical lathes with table of max. 16 m



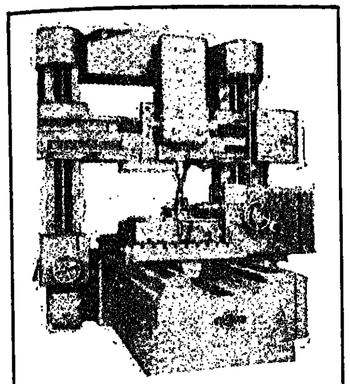


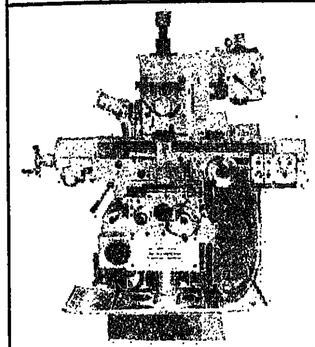


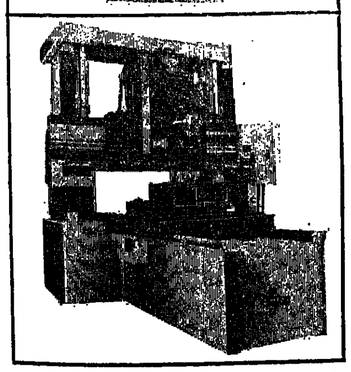


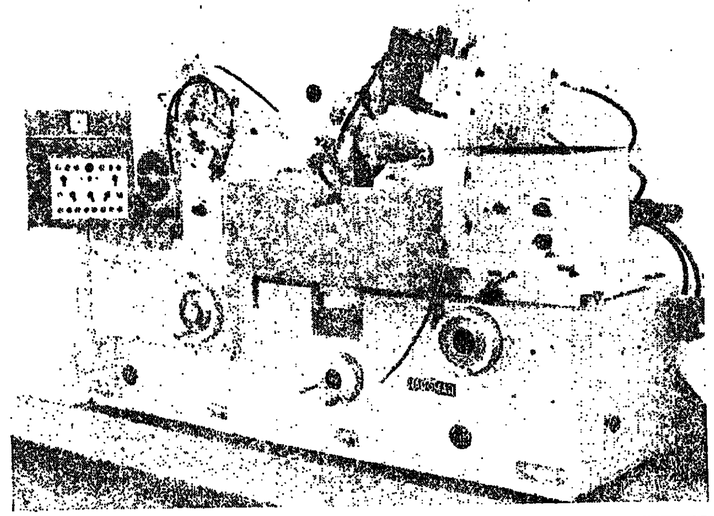
BORING AND DRILLING MACHINES

- cutters with fixed and moving gantry
- cutters for teething cylindrical gear wheels
- horizontal boring mills and cutters
- longitudinal cutters with gantry, with the digital display for frames, pedestals, platens, cross-beams, etc. processing
- universal cutting machines for machine tools and fine mechanics
- outlining cutters
- machines for grooved wedge cutting









DRILLING MACHINES

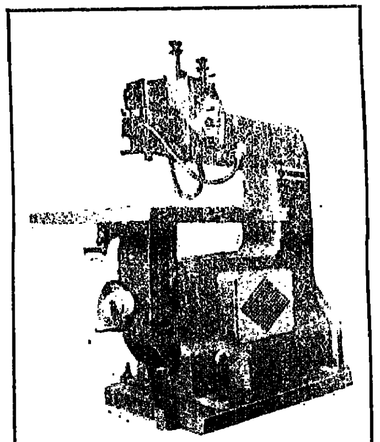
- jig borers
- multi-broaches for tubular plates
- bench-drills
- drillors with radial arm

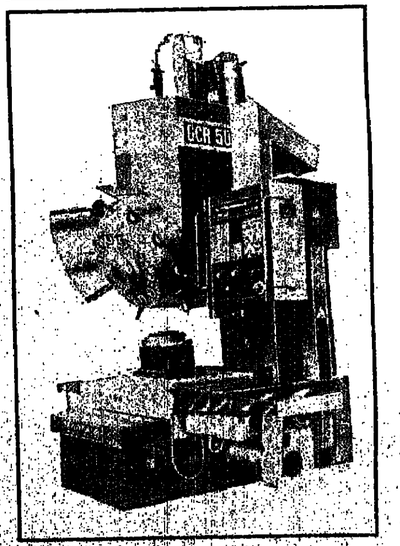
GRINDING MACHINES

- jig grinding machines
- slideway grinders
- roll grinders
- accessories grinders
- face grinders with horizontal shaft
- vertical shaft grinders
- interior and exterior circular grinders
- universal grinders
- gear grinders with stone worm

MACHINE TOOLS WITH A HIGH DEGREE OF AUTOMATION

- automatic transfer lines
- flexible automatic cells for shaft facing
- automatic lines for conventional facing
- processing centers
- transfer and assembly lines for chip removing processes
- specialized machine tools
- industrial manipulators
- industrial robots for different specific operations
- flexible automatic lines for processing larry brake elements





ICSITMU - TITAN

A REQUESTABLE COMPETITOR IN THE MACHINE TOOL FIELD

There are many competent producers in the field of machine-tool manufacturing but only a few can boast the level reached by ICSITMU-Titan, a real multifunctional creation plant including research groups of experts covering different areas of activity, from materials to electronics.

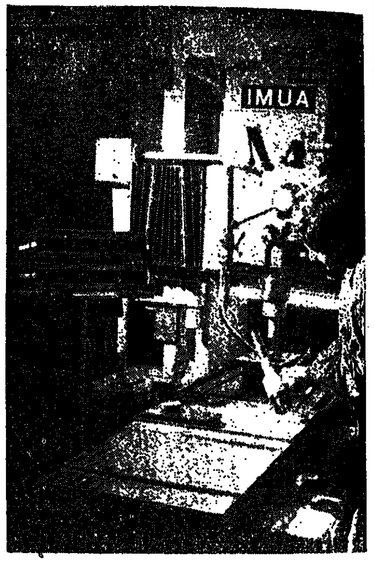
And although the immediate preoccupations of this institute are centered on machine-tool prototype research, development and testing – from universal machines with or without N.C. to flexible automated systems for production purposes – specific to the work carried out here are the assessment studies for making its own product development activity comply with the international trends in this field.

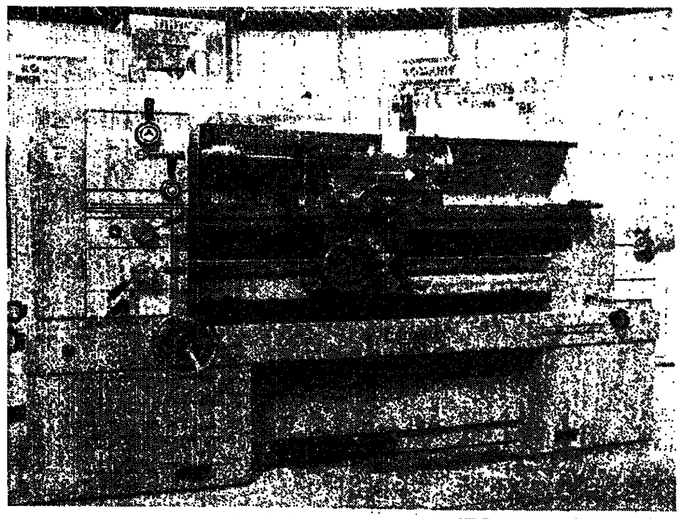
Obviously, this is not easy, taking into account the fact that in the field of machine-tool building, decisions are ever more difficult to make, particularly in a country such as Romania where the structure of the socialist system is incompatible with such notions as bankruptcy, competition, unemployment, a.s.o. And still, to remain competitive without unbalancing a whole system of productive relations has been a major question to which ICSITMU-Titan has found valuable solutions by

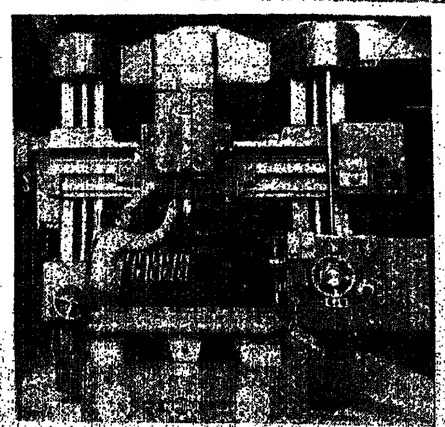
- using to a maximum extent the programmes advanced for the impetuous development of the national economy, whose very many requirements mean as many opportunities for diversification and updating, and by
- knowing and applying consistently the functional and quality requirements of the foreign partners in the production meant for export, which makes possible the outstepping of the serial production stage.

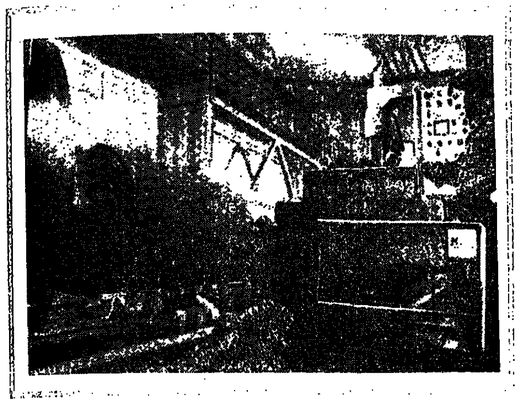
By acting thus ICSITMU-Titan, the outstanding machine-tool designer well-known in many foreign countries, also becomes the representative of the development policy of the Industrial Central specialized in this field. It ensures a large-scope activity to our specialists and various cooperation and exchange opportunities to foreign partners.

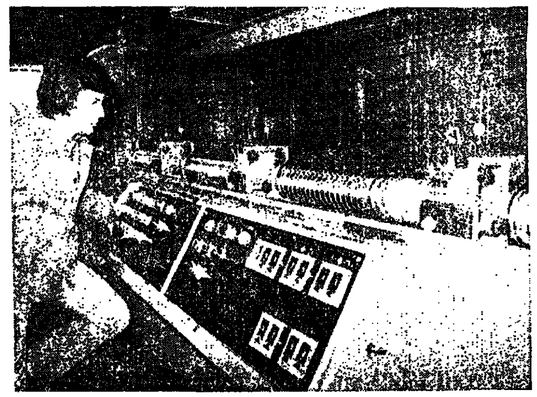
Angela VOICILĂ
Deputy Minister of the Electrical Engineering Industry

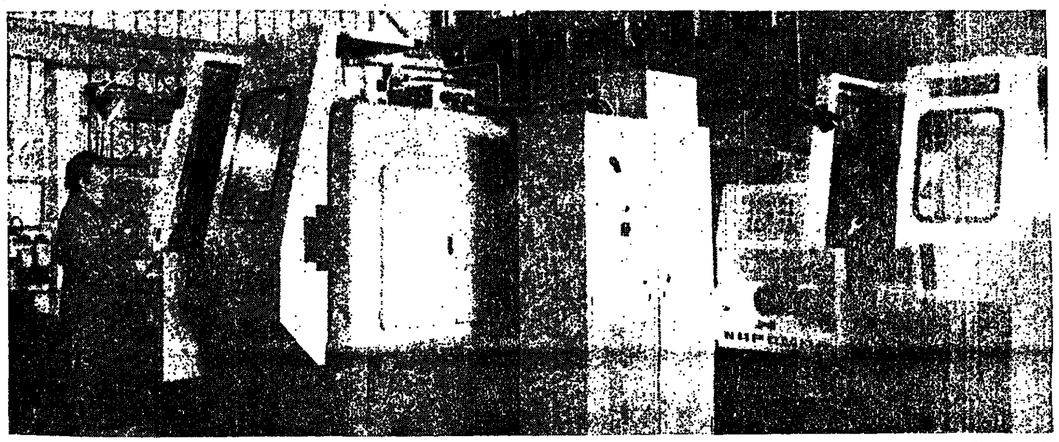


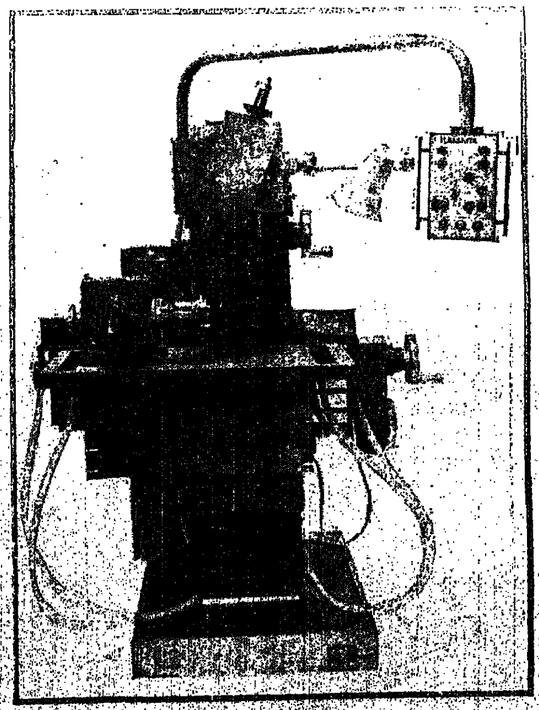






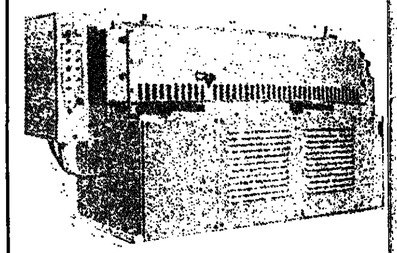


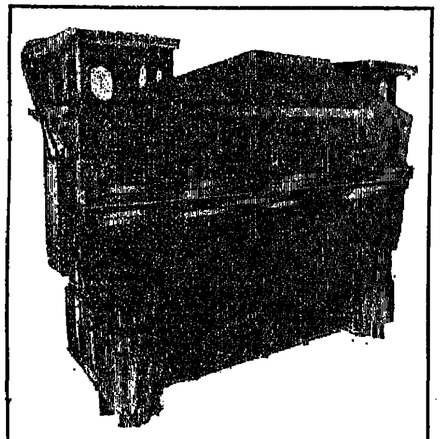


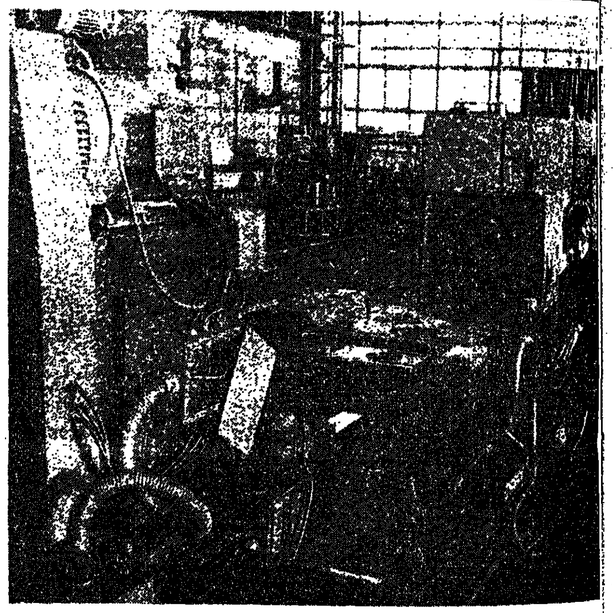


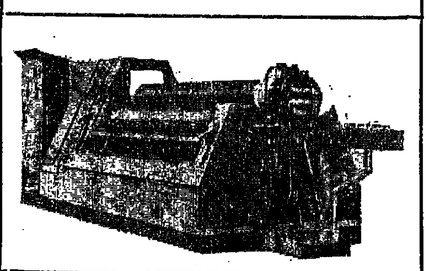
MACHINES AND EQUIPMENT FOR THE METALLURGICAL INDUSTRY AND OTHER RELATED INDUSTRIES

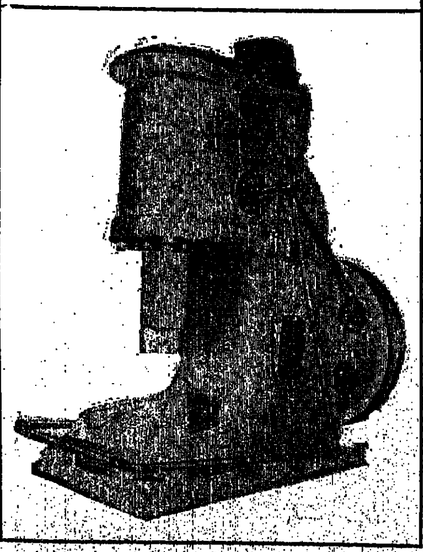
- rolling mills for strip cold-rolling
- *cylinder exchanging mechanisms*
- right and left unrollers
- rollers with expandable drums
- cutting knives with two pairs of rolls
- machine for strips straightening
- grinding machines for bar strips
- presses for cold straightening of thick sheet metal
- block rolling-mills for wire finishing
- heavy machine tools for hot and cold plastic deformation
- 400 t presses for sheet metal bending
- *double effect hammer presser*
- mechanical presses for trimming
- blooming rolling mills
- cutting presses
- horizontal mechanical presses for forging
- machines for sheet metal bending and rolling
- machine-tools for cutting and pressing
- hydraulic presses for sheet metal cupping

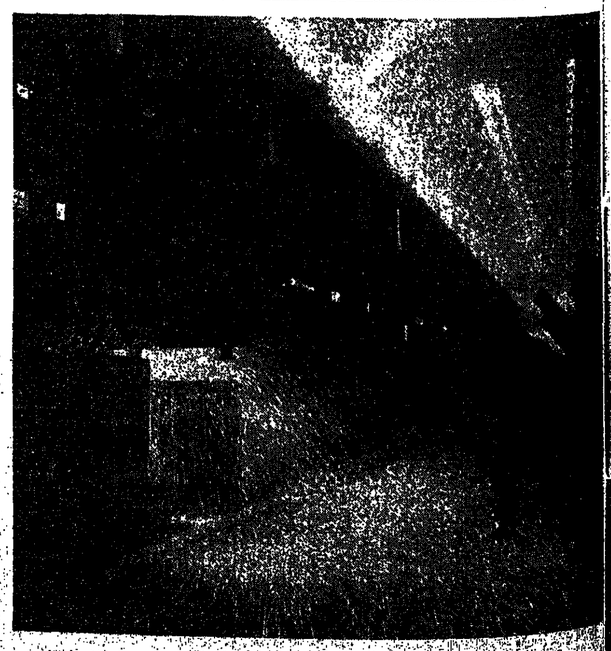






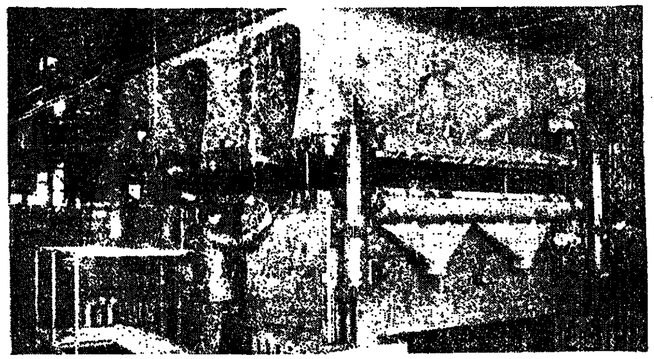


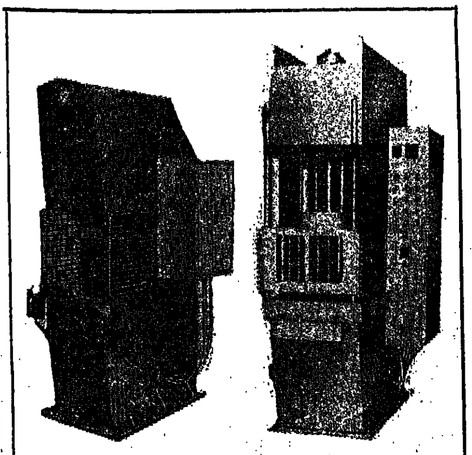




EQUIPMENT FOR THE WOOD AND PAPER INDUSTRY

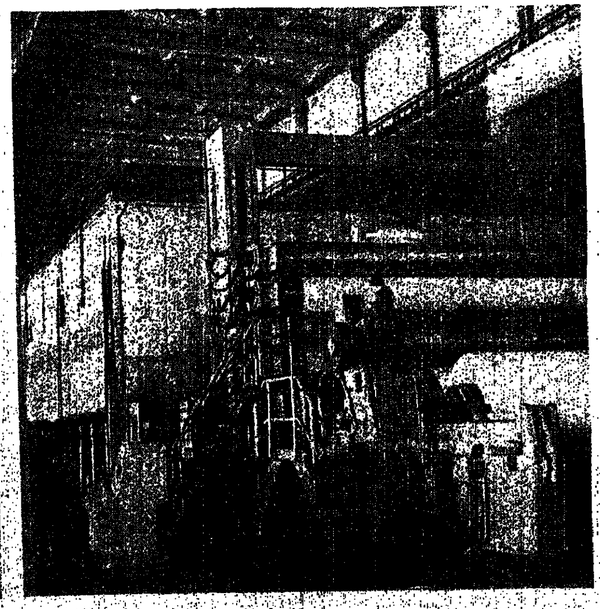
- PH 6, PHM 400, PH 15 m, PHM 1956 hydraulic presses
- AHM 3250 previous press
- horizontal band saw
- launching boxes
- plane and round sieves
- pressing and drying cylinders
- pressing calenders
- winders
- double-disc and conical refiners
- winders and pre-winders
- equipment for assembly lines





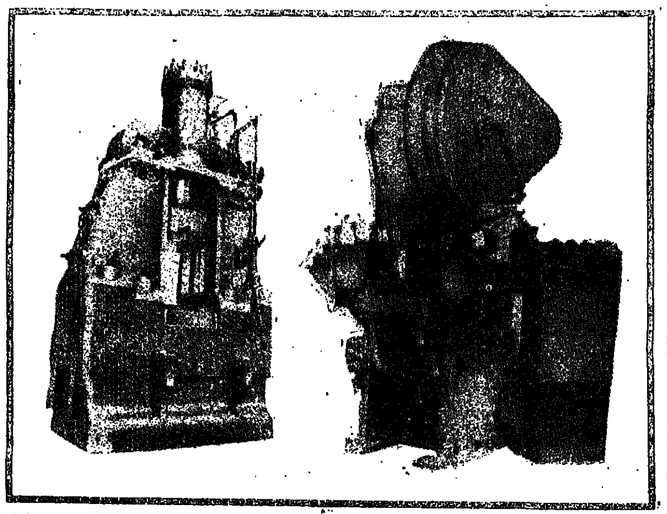
MACHINE TOOLS FOR THE PLASTICS AND RUBBER INDUSTRY

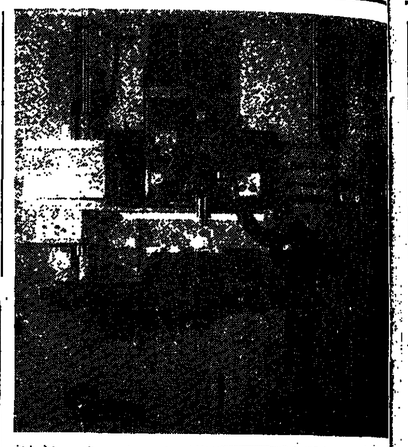
- machine tools for plastics pressing, injecting and processing
- machine for plastics extension
- units for body forming by blowing
- lines for special processing
- hydraulic presses for thermo-rigid plastics
- lines to impregnate plastics
- machines for hot feeding rubber extension

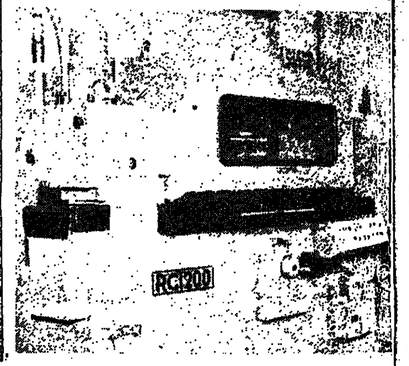


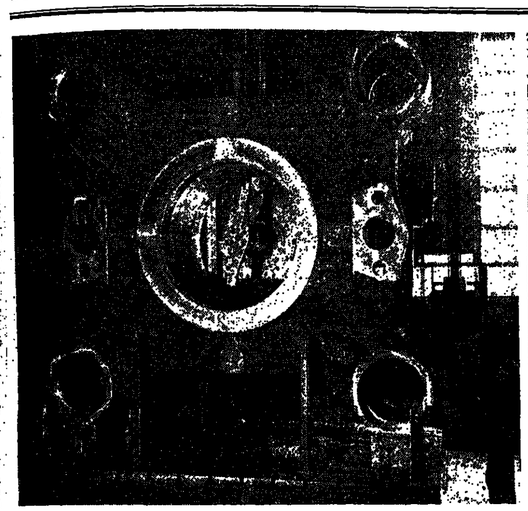
MACHINES FOR CUTTING TYPES OF SPECIFIC OPERATIONS

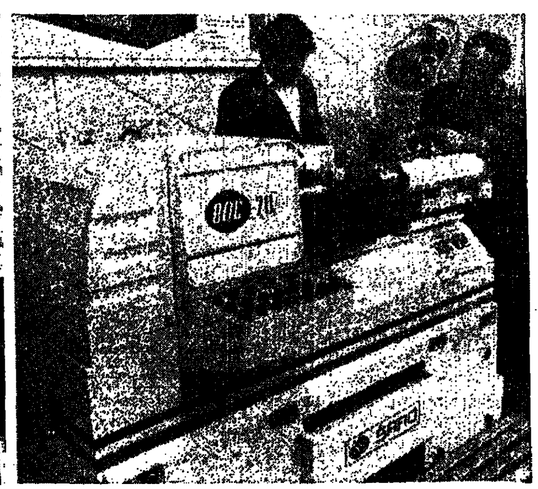
- eccentric press
- interior and exterior screw cutting machines
- transversal planing machines
- movable rotary machines
- *sharpeners*
- lapping machines
- broaching and slotting machines
- bar baking machines
- hydraulic blocks for hydraulic press driving
- power hammer with self-compressor
- open, closed and "C"-shaped frame hydraulic presses
- mechanical presses
- cutting machines with abrasive wheel
- twist-drill sharpeners
- machines for processing DNG-R distributors
- machines for linear and circular calibration
- fixed and radial head outlining machines
- welding machines





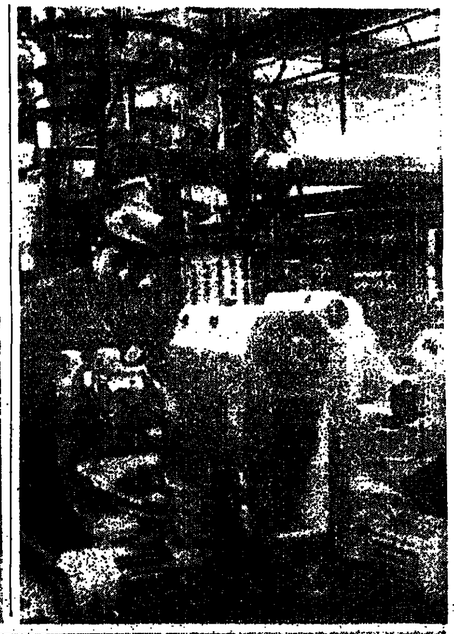


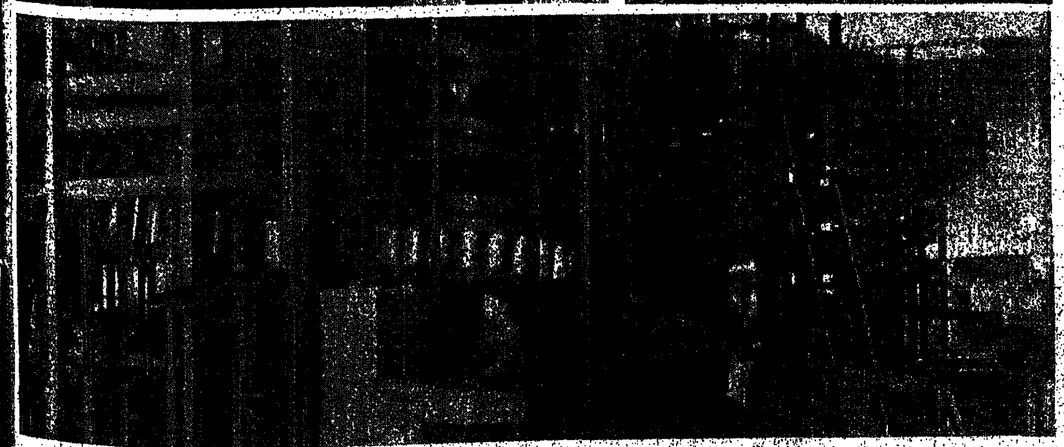


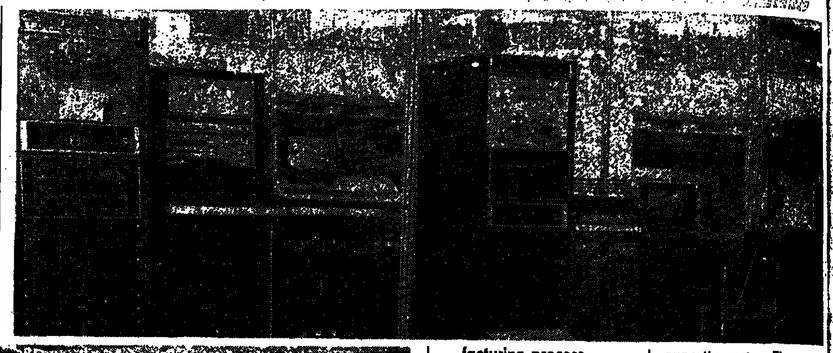


ACCESSORIES, SUB ASSEMBLIES AND COMPLETION EQUIPMENT

- cast iron and non ferrous metal parts for machine tools and equipment
- portable pneumatic hand tools
- wood patterns for parts casting
- hand tools
- cast iron pipes
- frames and accessories for machine tools
- casings
- standard type hydraulic elements
- simple and double polarizers
- metal plating (copper plating, zinc coating, cadmium plating, chrome plating, black finishing)
- special thermal treatments
- welded subassemblies
- spare parts
- fire extingulshers
- non-electric AMCs
- staple products
- ball screws

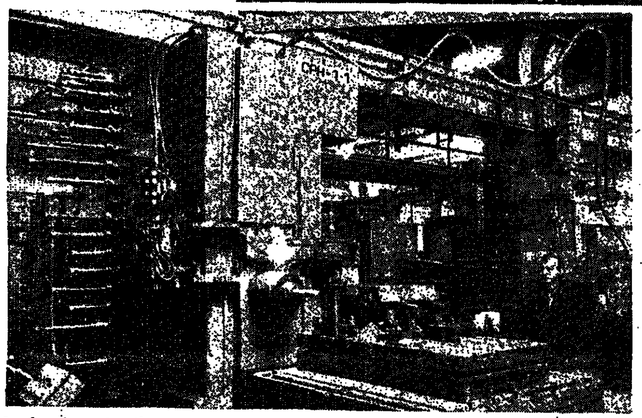


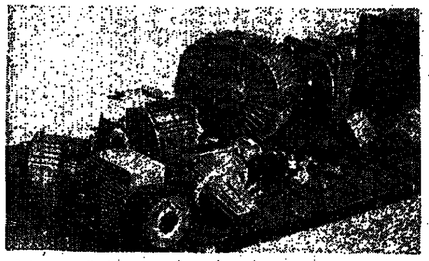




The only connection between the present machine tools and the earlier generations is their function denomination; thus, they are still turning, boring, drilling, milling and bending machines. In fact, in most cases they underwent changes not only in point of their operating manner and technical performances, but in a general attempt to meet the requirements of modern production, they have been modified from their basic technical-functional structure to their look.

The numerous and sophisticated electric and electronic elements, that are part of the machine tools and grant them an original character, represent the very essence of the progress registered in the field. And if users everywhere can find in Romania the necessary machines, that is also due to the fact that their achievement is the result of the cooperation between their direct producers and outstanding research centers and institutes.





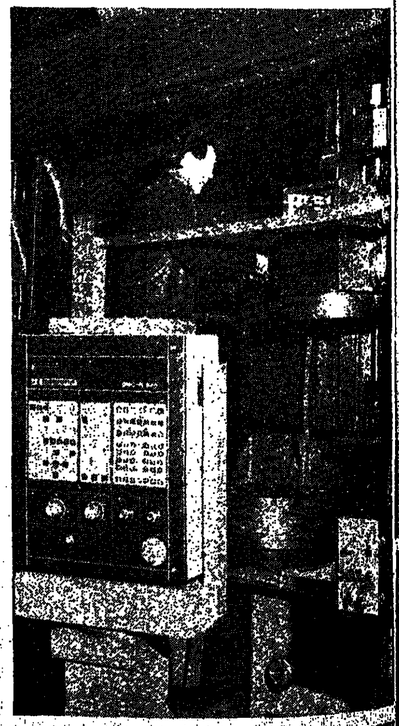
In connection with the above mentioned facts and just in case certain customers are also promoting R&D work in the field of machine tools, it is important to mention that we can offer them wide range of specific products. Among them we mention:

- **cylindrical rotor d.c. servomotors**
- **disc rotor d.c. servomotors**
- **cup rotor d.c. servomotors**
- **d.c. motors and micromotors for precision drives**
- **Inductosin-type linear and rotary inductive position transducers, tachogenerators and resolvers**
- **inductive and capacitive proximity transducers and slit-type transducers**
- **piezoelectric transducers**
- **visible and I.R. sensors**
- **vibration and shock transducers and limiters**
- **installations and devices for disequilibrium measuring and correction**
- **complex automation equipment, CNC type, NUMEROM series**
- **high and medium-high capacity process computers for machine tool control in the manufacturing process**
- **dedicated programs and program packages for the computer control of automatic machine-tools and industrial robots.**

Your partners in these fields, highly qualified in joint research activity for bilateral purposes or for third markets, cooperation, collaboration and exchange, technical assistance, training and service are:

- **ICPE — Research Institute for Electrical Engineering**
- **IPA — Research Institute for Automations, and**
- **ITCI — Research Institute for Computing Technique and Informatics**

all in Bucharest, to whom you can apply directly or by means of the foreign trade enterprises Electroexportimport, Electronum, Masinexportimport.



Valerius STANCIU, D. Eng.

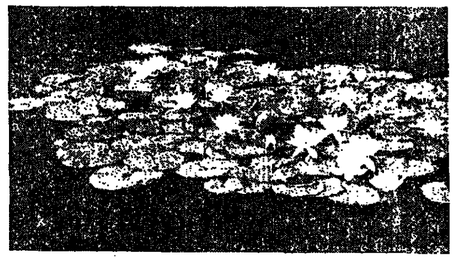
Director of the Technical Departament in the Ministry of Electrical Engineering Industry

Supplement brought under the supervision of the Technico-Scientific Information Department of ICPE

Principal coordinator: Prof. Gheorghe SAVII

Collaborators: Ing. POPESCU-Vladimir, TATU, Paul, CROITORU, Ing. DUMITRAN, MOISE, Gabriel, Florentin GHEORGHIU, Elena SOIMU, English version: Ing. NICHITA, Ing. CIOBANICA, Prof. BANESCU.

ECOLOGY AND DEVELOPMENT



The Danube Delta is Romania's youngest land, created by the big river through the alluvial deposits it carries. The whole area included between the three river arms (Chilia, Sulina and Sfintu Gheorghe) through which the Danube runs into the Black Sea, has always impressed by the original landscape of a savage beauty, as well as through its character of huge ecosystem, where you can meet concrete evidences of its uncommonly beautiful flora and fauna...

Metaphorically speaking, we became used to calling this huge water and land area (over 440,000 ha) the "birds' paradise", a "kingdom of the waters", etc. Undoubtedly reflecting the charm produced by the mirific Delta on the visitor, these attributes are applied to less than half of its area, that is to the "sea Delta" (including the Razelm-Sinoe lagoon complex) which is famous in the whole world and is visited both by tourists and natural science specialists.

The other part of the Delta — "the river zone" — made up mostly of mature soils (consolidated, stable, therefore usable), salt or metalliferous sands, peat — is the object of a long term complex melioration programme (adopted in 1983) which has in view its capitalization under economic aspect, by the growth of vegetal, animal, pisciculatural, forest and reed productions at the same time with the protection and preservation of the natural environment for the maintenance of the ecological balance and the development of tourism.

The Danube Delta Central is in charge of this programme. It is a department managing, in general, the riches of the area, and possessing an important arsenal of technico-material means. In a discussion with dr. Marin Niţu, the general manager of the Danube Delta Complex, we learned that, through complex hydroameliorative works, some of the river Danube soils have been introduced in the farming circuit. Productive arable lands occupy at present more than 35,000 ha while pasture areas have been increased. At the level of 1990 it is provided that by means of important works, agriculture in that area be extended to 111,000 ha, of which 93,000 ha are meant for vegetal cultures...

Therefore, "river Danube" will become one of the country's important agricultural basins. The first embanked zone was the one at Pardina, 26,000 ha of land were taken away from the marshes. Corn and wheat fields instead of reed. Agricultural development works are in an advanced stage at Streasa, Babina, Cernovca, Fortuna, and Somica. Ample works have been and are initiated in new farming areas (totalling 37,000 ha), as Sfintu Gheorghe-Branov, sand marshes being capitalized. Big tree plantations (apple, plum, almond, quince, cherry, peach, fig, etc.) vineyards and vegetable gardens have already been arranged and extended on big salt sand zones like Sărăturile, Carasuhat, Letea, Dasova, Chilia, Ivancea, Tiganus, and Sfistofca. Until 1990, 280 ha of grapevine and 300 ha with fruit trees will be planted in the Delta. Also, rice will be cultivated here for the first time (on 3,000 ha in the first stage).

"Other farming, and not only farming areas appeared and have developed" — added dr. Marin Niţu. Livestock has grown in the modern farms and complexes built at Chilia Veche, 1 Mai, Independenţa and other localities of the "river Delta". In perspective, the Delta's zootechny will have, as the above mentioned programme provides, 350,000 sheep, 30,000 cattle, 130,000 pigs, over 350,000 ducks and geese and many others. To this end one is using the Delta's existing resources but at the same time, more than 80,000 hectares of new pastures are being developed. Fishing and pisciculture are acquiring new dimensions. Important pisciculatural facilities have been built, while others are under way. According to the programme provisions, the pisciculatural patrimony of the Danube's river delta will comprise facilities covering a total area of 63,000 hectares in 1990, yielding higher outputs. Fishing in the Black Sea is being modernized (there are six coastal fishing vessels in operation at present). Silviculture has developed and continues to expand, the current forest stock already covering 23,500 ha. Woodland is to grow by another 6,000 ha until 1990. Moreover, a modern agricultural farm has been laid out and developed in Maliuc locality.

The entire activity of development and economic capitalization of the river delta strictly observes the norms of preserving the ecological balance of the Danube Delta as a whole, set by Romanian Academy specialists after long researches. "Throughout the region — Marin Niţu, DSc. pointed out — one has delimited natural and scientific reserves, natural monuments as well as places of refuge, nesting and rest for birds of all kinds (totalling 21,300 ha). Economic activities are absolutely prohibited there, and tourist access is limited.

The Delta Programme also envisages important activities of planning and urban development of the settlements in the Danube Delta. The enterprises for the complex exploitation of natural resources account for up to 90 per cent of the industrial outputs of other localities such as Sfintu Gheorghe, 1 Mai, Uzlina, Independenţa, Chilia Veche. The Delta people have continued to struggle with many difficulties, with the vicissitudes of nature, but they have never given in.

Important social, economic and urbanistic changes have been registered by other settlements of the Delta. For instance, Chilia Veche (sited in the northern part of the Delta) is to become an agro-industrial centre by the end of the decade, comprising, among others, a complex farm breeding pigs, a slaughterhouse, a mixed fodder factory, a plant processing fruit and vegetables, another one for the industrialization of milk — all of them being projects in the works. Also here many housing units have been erected (all in all, 500 apartments are planned to be commissioned); the same as a hotel accommodating 100, an agricultural high school, various socio-cultural and commercial centres, a new port, a station repairing farming machines, etc. At the same time Sfintu Gheorghe (a locality lying on the Danube's branch bearing the same name) will become a pisciculatural and agricultural centre having an important share in the economy of the Delta as well as in that of Tulcea county. Almost all the Delta's settlements are being renewed, turning into agro-industrial centres, such as Caraorman. Just like furthoves, Caraorman has seen the rise of many comfortable housing units, social and cultural establishments. Modern highways are being built — true firsts in this area (set up and consolidated on drift wood) — such as those linking the localities of 1 Mai and Chilia. A real highway leading for Tulcea started to be built (Tulcea is the seat of the county bearing the same name). Meaning that here, in the Danube Delta, fishermen will no longer represent the majority of the gainfully employed population. Other new professions have appeared and are still to come up with the deep and many-sided changeovers to be felt by this eastern region of Romania.

T. NITESCU ■

A TOWN OF THE DELTA

An old fishermen's settlement and a sea and river port located in the easternmost part of Romania, where the Danube flows into the Black Sea, Sulina has seen a rapid expansion in recent years. Several economic units are in operation here at present: a sea and river port which can accommodate large-tonnage merchant vessels, a shipbuilding and repairing yard, a tinned fish factory, pisciculatural units etc. Many constructions are under way in the town lying at the end of the navigable arm of the Danube bearing the same name: houses, socio-cultural and public facilities.

The Danube Delta has always impressed by its original landscape, its flora and fauna riches (top and middle); panoramic view of Tulcea, municipality (bottom)

THE FOUNDER OF A DEEPLY HUMANITARIAN SCIENCE

The life of woman scientist Ana Aslan is the same with the work she left us as a heritage, which strikes strong roots in the beginnings of gerontology and opens broad prospects which will mark this new discipline of contemporary medicine for a long time. Only the perspective of time will cast true light on her original scientific creation, unfolded in spite of any age limit. The activity to which she dedicated several decades in the National Institute of Gerontology and Geriatrics, so well-known in the world, materialized in a series of widely used original drugs, in hundreds of scientific papers published and delivered at many world conferences, in scores of thousand patients whose suffering was healed, in the hope sown in the soul of million aged people throughout the world, in the thoughts confessed to her assistants. Words can hardly express the dignity with which this woman scientist healed and faced suffering, avoiding or simply neglecting it while cultivating the desire for life, for work.

In charge of the institute — the first of its kind in the world — as early as its foundation, Ana Aslan conceived the possibilities of gerontology in biological research and geriatric assistance, bringing them within a single functional structure which was taken over as a model of organization by specialists all over the world. The gerontologic contributions of this reputed scientific researcher are international priorities concerning various facets of the field. A brief enummeration, too insufficient in comparison with the scope of a life-long activity, yet able to comprise its guidelines, should start with the elaboration and definition of the concept of gerontoprophylaxis, then stress the multi- and interdisciplinary character of the field, the elaboration of protection measures and strategies of medico-social assistance of the aged.

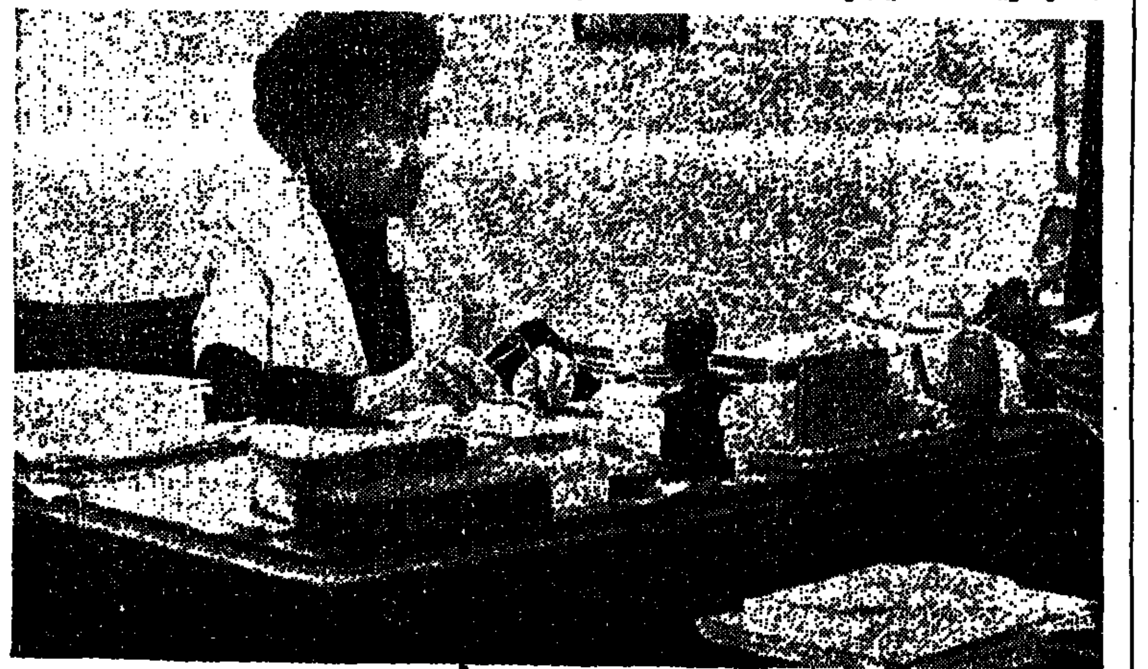
People speak, with good reason, about the "Aslan phenomenon", referring to both the range of Gerovital and Aslavital products and the method bearing her name. The doctor, endowed with Hippocrates' gift of devotion to the sick and with love of the aged, made our institute — "My enlarged family", as she rightly called it — a national and international clinic. Scores of thousand letters received from Romania and from abroad are an evidence of the value carried by a famous work. She was deeply impressed by illness and the help she gave with devotion and maximum scientific probity was enormous: she felt the greatest satisfaction when she succeeded in healing pain. "I receive so many letters of gratitude but most of everything I am delighted by those received from my fellow countrymen. But actually I dialogize with the whole world".

Now the name of Ana Aslan, her activity make up an entire chapter written with dignity in the history of science which started with Hippocrates.

The prestige she enjoys has brought the greatest scientific and state personalities to our institute. An evidence of it are the words of appreciation, respect and consideration addressed to her in the institute's Book of Honour. An ambassador of Romanian medicine and gerontology, she held conferences in 57 countries of the world, favouring an optimistic approach of old age and its problems.

For her remarkable contribution and merits, academician Ana Aslan was elected member of prestigious world scientific societies, awarded many diplomas, orders and medals here and abroad. On May 8, 1987, she received the 23 August Order first class, on the occasion of her 90th birthday for her contribution to the assertion of Romanian medicine and her long activity. Many of her ideas and aspirations came true, others have still to be continued with the strength, dynamism and struggle characterizing her, which she always recommended to us and which belong to our profession devoted to a noble goal — man's health and his prolonged life, permanently accompanied by the joy which only work can provide.

Dr. MIRCEA DUMITRU ■
The National Institute of Gerontology and Geriatrics



THE ROMANIAN SCHOOL OF GERONTOLOGY

Front-rank among the Romanian scientific schools which enjoy high appreciation abroad is that of gerontology-geriatrics. Its original contribution is even more important today when the number of elderly people has grown considerably in numerous countries thanks to the about 30-per-cent increment of life expectancy recorded in the last fifty years, which has spurred the study of the aging process and of old age diseases, as well as of the means of ensuring longevity. When he was feted by the Romanian Academy on his [illegible] birthday, scientist Constantin I. Parhon uttered words sounding like a slogan of the Romanian school of gerontology-geriatrics: "We assert that old age is a disease, a pathological state (...) Our researches show that we can prolong old animal life, man's life included, beyond the ordinary limits".

This outlook, according to which life can be prolonged and old age must be treated like any other disease was taken over by C.I. Parhon from his forerunner, Gheorghe Marinescu (1863—1938), the illustrious neurologist who worked out an original, trailblazing gerontological theory. His conception makes him the father of this school. Gheorghe Marinescu is one of the first researchers in the world to have penetrated to the heart of the cell, trying to provide a physicochemical explanation of the phenomena of old age and death, a realm in which he came into an open polemic with the famous Russian microbiologist Ilya Mechnikov.

In his work Old Age and Rejuvenation (1929), the great neurologist voiced his confidence in the possibility to prolong life by slowing down the process of aging, but considered rejuvenation a utopia, since everywhere in nature "completely reversible transformations are impossible (...) There is no reversibility either in the regeneration of albuminoids or in the evolution of human beings". The scholar created his own theory regarding the mechanisms of aging and death, relating them to the changes taking place in the biochemistry of the nervous cell, and especially to "a lack of chemical synthesis of the cell itself". An important role allegedly goes to the colloidal phenomena, consisting in the precipitation and dehydration of the cells' colloidal substances. The colloidal theory of old age assesses that the aging of the nervous cell is translated into the progressive loss of the nuclear chromatin through dehydration (therefore the loss of the water surrounding the nuclear colloid), the thickening of the neurofibres characteristic of senile brains, the drop in the number of oxidizing ferments — all these phenomena being considered irreversible. Such natural phenomena can be delayed however, and physiological (normal) and pathological old age can be treated, their evolution being slackened.

Constantin I. Parhon (1874—1969), an undisputed master of endocrinology on an international plane and the author (alongside M.H. Goldstein) of the first complete endocrinology treatise in the world (1909), undertook pioneering researches in the realm of gerontology-geriatrics too. His researches into the mechanism and treatment of old age, into the modifications of superior nervous and endocrine activities taking place in relation to age, as well as to the corresponding biochemical processes, are today an asset of world science. A major role in the process of aging is attributed by C.I. Parhon to metabolical disorders, especially the predominance of disassimilation over assimilation. Working out a general concept regarding the time factor in the evolution of biological processes, he founded a doctrine of the endocrinology of various life stages, proposing the term ilikibiology for the various ages' biology (1925). He also laid the bases of a clinical and experimental study of old age, conducting the experimental aging of lab animals. He is the author of studies on the morphopathology and physiopathology of old age, differentiating between physiological and precocious aging.

As regards the therapy of old age, the precocious one included, he proposed and introduced treatments with glandular extracts and hormones which proved efficient; thanks to him, the first organotherapeutical medical drugs were created in this country (he was a pioneer in ovarian opotherapy in the world). His works Old Age and Its Treatment (1948), The Ages' Biology. Clinical and Experimental Researches (1955) have an incontestable place in the world scientific heritage. Faithful to his lifelong creed of a scientist citizen, he called attention to the significance of social factors and material conditions in the struggle to prolong life.

C.I. Parhon's work attracted a large number of Romanian physicians to gerontology, and starting in 1952, when the Institute of Geriatrics was set up (first headed by that scientist and later by his pupil and continuator, Ana Aslan) Bucharest became a true capital of world geriatrics; since 1974 the institute's name has been The National Institute of Gerontology and Geriatrics. During the last few decades Romania has played host to important international meetings in the field: the International Gerontology Symposium (Bucharest, 1970), the International Congress of Clinical Gerontology (Mangalia, 1977) etc. Notable works have also been published such as Novocaine, a Eutrophic and Rejuvenating Factor in the Prophylactic and Curative Treatment of Old Age (C.I. Parhon, Ana Aslan, 1955), The Heart with Old People (Ana Aslan, 1960), The Asynchronous and Asynergic Involution of the Endocrine System (Ştefan M. Milcu, 1970), Man and Aging (Victor Săhleanu, 1971), Biology and Life (O. Fodor, 1971) — this enumeration being in no way exhaustive. Gerontocybernetics was also founded (C. Bălăceanu-Stolnici).

The most outstanding personality of Romanian gerontology and geriatrics after 1944 was undoubtedly the late professor and academician Ana Aslan (1897—1988), director of the National Institute of Gerontology and Geriatrics, herself an example of lucid longevity. Her researches covered all the domains of gerontology, with investigations extended to the mechanism of the morphological, functional and biochemical processes of aging, as well as to the latter's demographic and epidemiological aspects. Promoting researches into social gerontology, Ana Aslan envisaged organizational measures to stimulate the activities of elderly people. She studied heart diseases specific to old age and described new clinical signs and new functional tests related to cardiovascular diseases.

As concerns the prophylaxis of aging, she indicated a new complex treatment method known throughout the world today. It is essentially based on the effect of novocaine (procaine H3) in preventing and alleviating age-related involution disorders (atherosclerosis, scleroderma, vitiligo etc.). She widely applied the method in the geriatric clinic in the form of original products patented as inventions: Gerovital H3 and Aslavital (in collaboration with I. Polovrageanu).

Undoubtedly one could write a lot more about the Romanian school of gerontology especially about its present-day successes homologated throughout the world, and about its leading representatives — in fact this would deserve a whole book.

I. M. ŞTEFAN ■

The National Institute of Gerontology and Geriatrics in Bucharest (top); Ana Aslan at her desk (middle); aspect from the homeland... lab of the National Institute of Gerontology and Geriatrics (bottom)

THE SHEPHERDS' CELEBRATION

Sunday, May 22, 1988. At dawn, on the submountaine plateau of Huta-Carieze commune, the alphorns heralded the prelude to a unique celebration: Simbra oilor. The fresh grass in the vast natural amphitheatre was increasingly covered by moving colours — children, young and old people wearing the unmistakable folk costumes of the Oaş Land. The ancient ritual specific to this northwestern Romanian area was once more revived: the ceteras (violins) played lively tunes, the frenzied dance accompanied by wild, if solemn, shouts (as one can hear in Oaş alone) enthroned a triumphant joy between the earth and the sky.

In a dialectical acception, simbra means an association created for setting up sheepfolds around which sheep graze in summer. The ritual, repeated every spring, reflects in essence the moment when the sheep go out grazing. Before their departure, rough understandings are concluded between shepherds and sheep owners: milking and milk weighing provide sufficent data as to the amount of cheese to be made at sheepfolds in the hot months. The conclusion of the understanding is invariably followed by a feast invoking the good auguries for the grazing season.

Zootechnical engineer Gheorghe Sabău is a notorious figure not only in the Oaş area but also all over Satu Mare county he seems to be known by numerous sheep-breeding experts. He was a shepherd himself (more or less acknowledged as such), then a foreman at sheep-breeding farms; at 30 he graduated from the zootechny faculty.

Gheorghe Sabău knows everything about sheep. According to him sheep are the subject of stories which could last for weeks on end. One could hardly suspect him of exaggerating. His references are inexhaustible, should we judge only by his mention of Thomas Morus. It seems the English Utopian very accurately grasped the role played by the meek sheep in the outbreak of the 16th-century revolt in England. Gheorghe Sabău's attitude towards sheep is similar to worship: from his inner coat pocket he produced an envelope and with delicate gestures took out a wool sample, saying: "Just look, what crystal-like transparence! The thread is as soft as silk and 10 cm long".

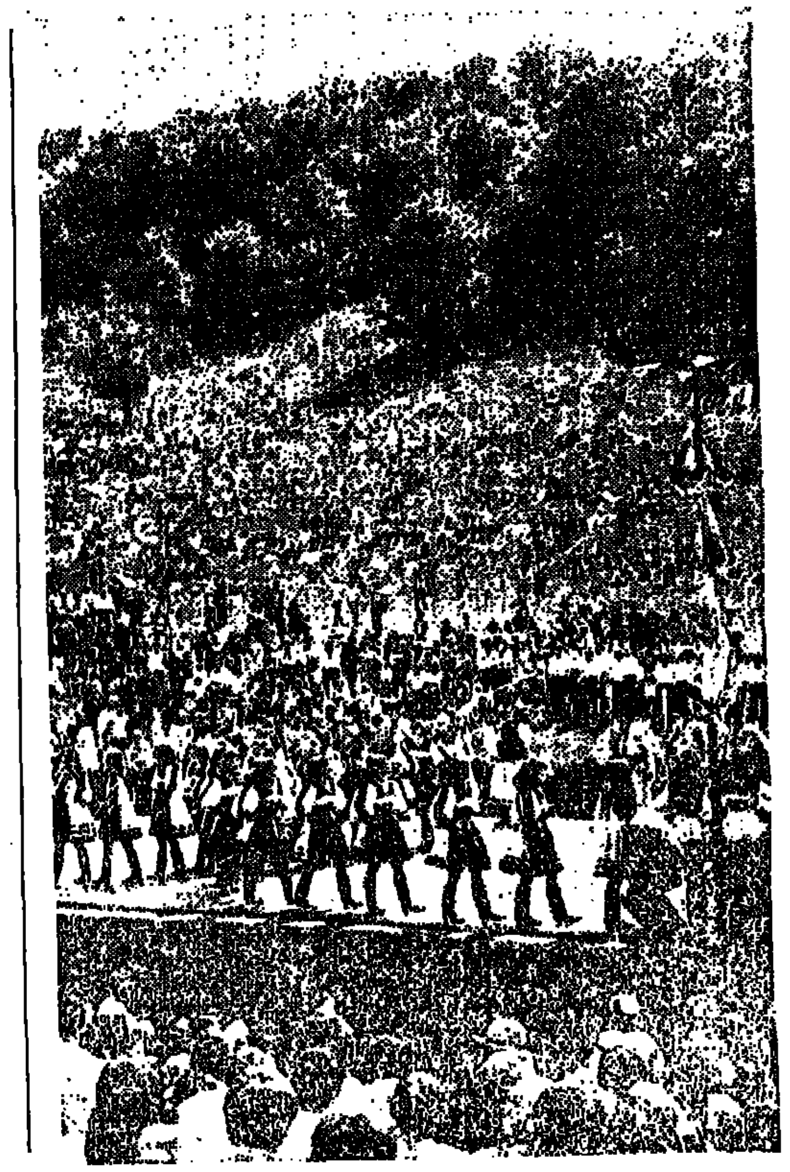
The brilliant tuft engineer Gheorghe Sabău was admiring was a sample of the Transylvanian merino breed — the creation of the shepherds in the country's Western Plain. Our collocutor infected us with his enthusiasm, telling us about their remarkable performances — 12.5 kg of wool per sheep, wool fineness between 18 to 22 microns, and wool length between 4—6 to 10—12 cm. Adding to this ("a very important thing") is the washing efficiency which has grown from 34 to 40—45 per cent clean wool. Of the total number of sheep (which has doubled over the last 30 years), 87 per cent is accounted here, in Satu Mare county, by the Transylvanian merino breed. The rest, 13 per cent, are Turcana-breed sheep ("they deserve a capital letter, since in the lactation period they produce up to 100 l of milk", Gheorghe Sabău stressed).

In Odoreu commune and at the Sheep-Growing Station of Research and Production in Carei town the Simbra oilor celebration was preceded by two related events: the Ovis '88 exhibition and the mechanical shearing contest. The competition of elite farms (there were 17, including the neighbouring counties of the Western Plain) and of individual breeders gathered more than 500 contenders: sheep, rams (some of them weighing over 100 kg) and ewe lambs. As it was expected, many prizes were granted, with some of them going to "ordinary" researchers and sheep breeders. However, the medals were actually carried by sheep with thick and curly skin. The special prize and title of the mechanical shearing championship involving 19 participants went to shepherd Gheorghe Alexuţan, who beat the speed record — 44.8 seconds per one kilogram of wool of sheared sheep. "This lad and I are from the same village" noticed engineer Gheorghe Sabău. It was not meant as a boastful remark, but rather as a vague nostalgia for the times when he himself used to be a shepherd...

Instead of a dedication, he wrote on the invitation-programme of the Ovis '88 exhibition with a ball pen: "Sheep (like cows) are the species of the future; they do not compete against man in the cereal consumption, but they turn vegetal resources and secondary production into proteins, in other words into food for man. As a matter of fact these species have been created to save man the trouble of grazing". Obviously, beyond the witty message, his words convey once more a heartfelt creed of his profession.

In May sheep leave for the mountain or for the sweet hill tops to graze the juicy grass throughout the warm season. Every village of the Oaş Land has joined in the farewell feast, according to the customs, no matter whether sheep belonged to state-run farms or to individual breeders. This spring over 100 flocks (each one having at least 100 heads) took the pen road, accompanied by the most trustworthy shepherds — elected by the village wisemen's council — and their faithful sheepdogs. Simbra oilor of May 22 which took part on the plateau of Huta-Carieze, meant an apotheosis of the shepherds' feast. Gathered there were thousands of locals and guests from neighbouring villages and even from farther away. Green cheese, grilled meat, 50—60° strong plum brandy, adorned pies and knot-shaped bread were spread on skilfully embroidered linen towels woven on looms. The people — young and old — wearing their best costumes, sang and danced to their hearts' content. In other words a feast of joy, traditionally related to the dowry specific of this land, which increases continuously with the moving white of the flocks from mountain and hill tops.

VIORICA CIORBAGIU ■
Photo: MARTIN SARCA ■



View of "the Shepherds' Feast" (top, right); an Oaş bride (top, left); children violinists (middle); measuring milk (bottom, left); aspect from the "Ovis '88" exhibition (bottom, middle); elite specimen (bottom, right)

ROMANIA COMTURIST

ALWAYS AT YOUR DISPOSAL

COMTURIST — a foreign trade enterprise specialized in promoting sales of goods in and from Romania, with the payments in freely convertible currency — is at your disposal with a network of over 400 shops organized both in Romania's capital and in most tourist and balneal resorts in the country. The enterprise offers its buyers over 10,000 superior quality products : cosmetics, drinks, cigarettes, souvenirs, handicraft items, electronic and electrotechnical household appliances, garments, footwear, interior decoration objects, cars, spare parts for cars, etc.

In and through the Comturist shop network you can choose and buy goods personally, during your sojourn in Romania, by paying cash or using credit cards or traveler's checks. Also you can offer gifts to your relatives or friends in Romania, directly from your country, by transferring the desired amount of freely convertible currency to the Comturist account, for the beneficiary of your choice, using for that the enterprise's order system : goods of your free choice, standard package, orders specified by the forwarder, etc.

New creations, appreciated for their quality, distinguished with medals at international fairs, are present next to products that make up the traditional offer in the stands of the Comturist shops.

COMTURIST — ELECTRONIC AND ELECTROTECHNICAL PRODUCTS. In the last few years, parallel to the development of the electronic and electrotechnical industries, the Romanian offer in this field has diversified. Prestigious enterprises like "Electronica" of Bucharest, "Tehnoton" of Iasi, the Cugir Factory of electric products, "Electroarges" in Curtea de Arges, supply a rich range of freezers and refrigerators of various capacities, electronic stoves, black-and-white and colour tv sets, radio-cassette recorders, etc. Mention should be made of the new Hi-Fi products : A-350 audio amplifiers, E-850 stereo equalizers, loudspeakers, T-350 radio deck tuners, PAS-4 stereo record players, the stereo musical minisystem; "Tehnoton-2202" stereo musical system consisting of amplifier, tuner, record player, cassette recorder ; Iris, Rio, Monaco radioreceivers, "Italy" radio cassette recorder for cars with three wave lengths, "Cromatic 4001" colour tv set with a diagonal of 67 cm etc.

COMTURIST AND FASHION. A complex offer of the light industry has already entered the Comturist shop network. The most successful collections of the Focsani, Bucharest, Craiova, Sebrnicesti, Bacau, Miercurea Ciuc and Suceava garment factories can be found there. You can purchase garments with modern designs and in a great variety of colours, models, sizes for women, men and children, leather garments and cotton knitwear. Also, the "Carole" mark presents garments with various inscriptions and drawings, in beautiful colours, metallic prints, having a modern design. Sports garments are also in great demand. The latest creation are "Joe" blue jeans, cut according to the latest patterns.

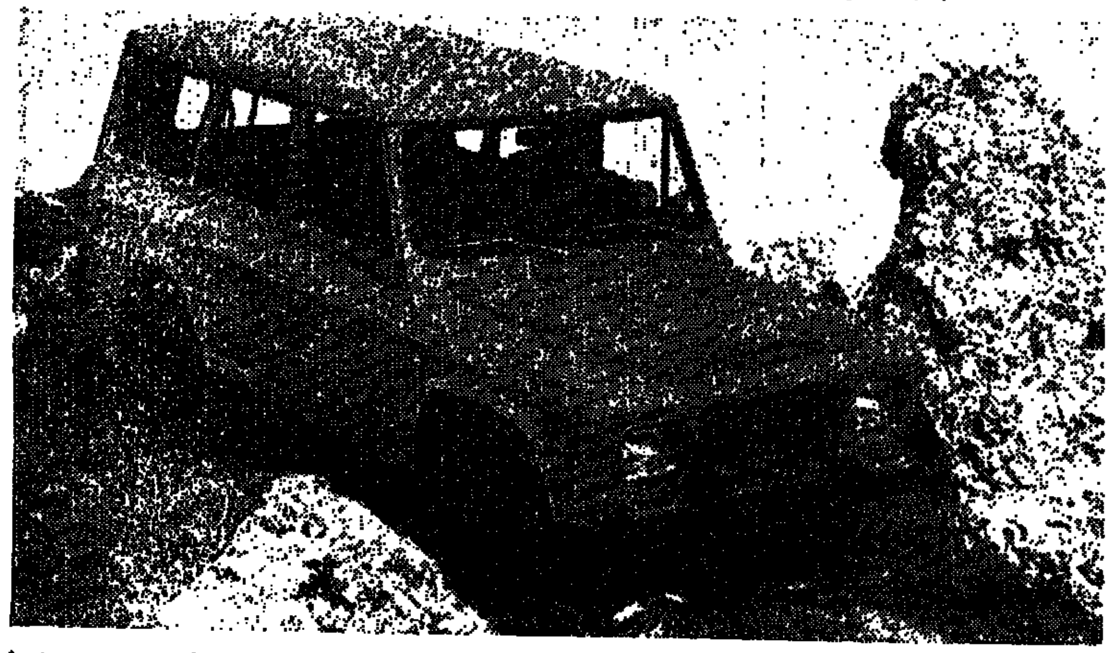
Mention should be also made of wool knitwear, fabrics, haberdashery, Morocco leather goods, etc.

COMTURIST — COSMETIC PRODUCTS. The rich range of cosmetic products consisting of traditional products like "Gerovital"-formula 2, which also includes massage cream, and "Pell Amar" was rounded off with deodorant perfumes and sprays — "Season", "Cordial" with four fragrances, the RO sprays, "Nalbalux", RB with chlorophyl, the "Violet", "Novo", "Super", "Stil", "Azur" soaps based upon natural essences of fir, lemon, mint, wild camomile, tile, and other herbs. They are produced by the enterprises "Farmec" of Cluj Napoca and "Miraj" of Bucharest. Shaving products like "Mennen" — lotion, "Cordial" — shaving foam and after shave lotion are offered for men. There are also shampoos of the "Gerovital", "Wellapon" and "Crisan" ranges.

The specialists of the Comturist enterprise have also introduced, for the first time, a series of Romanian medical apparatus for individual therapy. "Calmostin NS T-02", a portable neurostimulator, used in the symptomatic treatment of acute and chronic, rheumatic, neurologic and vascular ailments and "Therastim" LP-MST-03" an installation used for the treatment of neurologic affections, sequelae of cerebral vascular accidents, in paralysis and muscular paresis, by means of classical acupuncture and electro-acupuncture, are only two of them.

COMTURIST — PROMPT DELIVERY AND ADVANTAGEOUS PRICES. The Romanian city and all-terrain cars need no presentation. They are recommended by the international trophies won at prestigious competitions. Among the numerous types, Comturist places at your disposal the Diesel ARO range — types 240, 241, 243, 244, — ARO 10-1 with gasoline, Dacia 1310 Standard and 1310 Standard Sport, Oltcit Club 2R, For the new Dacia models you can get price information by dialing the following number : 18.01.00.

M. CONSTANTINESCU



ROMANIA LITTORAL '88

During any season the Romanian Black Sea coast is a source of health, its dowry consisting of :

- sapropelic mud
- lakes rich in mineral salts
- sea water
- mezothermal mineral water springs
- balneal cure centres of international renown
- recreation means of great diversity

Foreign tourists, coming in large numbers to spend their vacations on the Black Sea coast do it not only for the advantage of a mild climate but also for other reasons. Here are some of them :

— very good accommodation and excellent food in elegant and comfortable hotels and restaurants, highly efficient natural factors for balneal treatment, balneal sanatoria with sophisticated medical equipment, multiple possibilites for organizing trips to the surroundings of the Romanian littoral as well as to the Bulgarian Black Sea coast.

Through the wide range of natural conditions, the technical equipment and modern treatments applied, therapy on the Black Sea coast offers good conditions for recovery, prophylaxis as well as treatment all the year round, in Eforie Nord, Mangalia and Neptun resorts.